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Predicting Anxiety From Parent And Childhood Variables

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PREDICTING ANXIETY FROM PARENT AND CHILDHOOD VARIABLES

by

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ABSTRACT

The high prevalence rate, significant distress and impairment, and persistence of childhood anxiety disorders highlight the need for continued theoretical conceptualization and research into the developmental pathways associated these disorders. In response to this need, one goal this project was to examination and identify variables associated with the development and/or maintenance of child anxiety disorders. A second goal of this project was to examine the potential role of learning from parents as a risk factor in the development of child anxiety, with a particular emphasis on three learning mechanisms: modeling, information transfer, and reinforcement of anxious behaviors. The third goal of this project was to compare and contrast the developmental predictors of anxiety in White versus Hispanic samples. Data was collected from a sample of mothers in the community with at least one child between the ages of 6 and 12, and an unrelated sample of young adults. Significant predictors of anxiety were identified in both samples, and the hypothesis that anxiety may, in part, be learned from parents was supported in both samples. In addition, results indicated different sets of predictors of anxiety in White versus Hispanic participants. Limitations and implications of the findings are discussed.

This dissertation is dedicated to my wife, Ashley, who has been a source of support and inspiration throughout graduate school.

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CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW

The fears and anxiety are normative experiences during child development, and for most children, the experience of fear may be adaptive (Gullone, 2000). However, a significant percentage children experience clinically significant levels of fears. Clinical fears are differentiated from normal fears based on the intensity, persistence, and interference with daily functioning caused by the fears (Gullone). Though precise estimates vary, the prevalence of childhood anxiety disorders is between 8 and 12 percent (Bernstein & Borchardt, 1991), and anxiety disorders appear to be the most common childhood psychiatric disorder (Costello & Angold, 1995; Dadds, Spence, Holland, Barrett, & Laurens, 1997). Anxiety disorders significantly interfere with the lives of children who are affected by them (Bernstein, Borchardt, & Perwien, 1996). Despite the common belief that childhood anxiety is a transient condition, these disorders tend to persist if untreated, and children with anxiety-related symptoms may eventually develop anxiety-related complications as adults (Ost, 1987). For example, adults with social phobia have been found to exhibit difficulties with occupational functioning, academic performance, impaired social relationships, and possibly increased levels of alcohol consumption (see Beidel & Turner 1998, for a review).

Evidence-based treatments and prevention programs have been developed for anxiety disorders (e.g., Dadds et al., 1999; Kendall, 1994). However, despite their relative success, many children remain symptomatic at the completion of treatment. For example, some treatment outcome data indicate that as many as 40-50% of children fall in this category (e.g., Kendall, 1994; Kendall et al., 1997). In order to enhance the efficacy of these treatments, additional

research is needed to elucidate and identify variables associated with the development of anxiety disorders in children so that interventions may be targeted more effectively.

The addition of parent participation in treatment appears to enhance the efficacy of cognitive-behavioral treatment in anxious children (Barrett, Rapee, Dadds, & Ryan, 1996; Cobham, Dadds, & Spence, 1998). For example, Cobham, Dadds, and Spence compared the effectiveness of individual cognitive-behavioral therapy (CBT) versus family-based CBT with anxiety-disordered children. They found that, one year after the completion of treatment, 71% of the children who received family-based CBT, compared to 59% of children who had received individual CBT, no longer met the diagnostic criteria for an anxiety disorder. These results suggest that aspects of parenting associated with child anxiety disorders may be a critical component of treatment, underscoring the importance of research examining family processes associated with childhood anxiety disorders.

A number of reviews have been conducted in which the variables thought to be associated with the etiology of childhood anxiety disorders have been identified (Craske, 1999; Manassis & Bradley, 1994; Rapee, 2002; Vassey & Dadds, 2001); however, many of the models based on these variables lack extensive empirical support. Rapee provides an extensive conceptualization of the variables that may be associated with the development of child anxiety, and his model appears particularly parsimonious. Specifically, he describes the etiology of childhood anxiety disorders from a developmental perspective, and he summarizes the interrelationships between salient risk factors associated with the development of childhood anxiety disorders. Risk factors discussed by Rapee include a behaviorally inhibited temperament, parental anxiety, parent-child interactions (i.e., control and a lack of warmth), and vicarious or instructional learning of avoidance from parents. Rapee argues that a behaviorally inhibited temperament may be a

critical component to the development of childhood anxiety disorders, whereas other variables likely mediate or moderate the association between a behaviorally inhibited temperament and subsequent occurrence of an anxiety disorder. As an introduction to the present study, the variables delineated by Rapee will be considered in detail.

Behaviorally Inhibited Temperament

Temperament often has been examined as a variable associated with the development of psychopathology in children. In general, temperament appears to be a relatively stable disposition that influences the expression of an individual's activity, reactivity, emotionality, and socialability. Elements of temperament are discernable early in life and are likely strongly influenced by biological factors (Buss & Plomin, 1984, Goldsmith & Campos, 1986; Goldsmith et al., 1987; Thomas & Chess, 1984).

Though various temperament "styles" have been identified (Prior, 1992), behavioral inhibition (also referred to as behavioral inhibited temperament, withdrawn temperament, or a shy temperament) appears to be related to the development of anxiety disorders. Behavioral inhibition is characterized by a tendency to react with fear and withdrawal in novel or unfamiliar situations (Kagan, 1997), and behavioral inhibition includes the following characteristics that seem to appear during early childhood: shyness, avoidance, uneasiness, and fear of unfamiliar situations, people, or objects (Turner, Beidel, & Wolff, 1996).

Behavioral inhibition, as a construct, may be measured by studying behavioral confrontations with unknown persons or objects (Garcia-Coll, Kagan, & Reznick, 1984). Other strategies used to assess behavioral inhibition include child self-report measures (Muris &

Meesters, 2002; Muris, Merchelbach, Wessel, & Van de Ven, 1999), parent-report (Muris & Meesters, 2002), and retrospective recall of inhibition (Reznick, Hegeman, Kaufman, Woods, & Jacobs, 1992). According to Rapee (2002), some advantages to self-report measures of inhibition are that responses are based on variety of situations and conditions, they are cost-effective, and they can easily be administered to large populations. Typical of self-report measures, however, a disadvantage is their reliance on the perceptions, insight, and motivations of those providing the reports, and consequently the reports may be biased. An advantage of observational measures is that they likely provide a more objective measurement of inhibition. A disadvantage is that they often examine inhibition at a discrete point in time, which may be associated with limited stability of the measure. Another disadvantage is that observational measures rely on contrived or artificial situations that may lack external validity.

The two constructs, behavioral inhibition and anxiety, share a number of common features such as withdrawal, speech latency, avoidance of novel stimuli, difficulty initiating conversations, reluctance to enter unfamiliar settings, and heightened physiological activity (Turner et al. 1996). The overlapping qualities of these two constructs likely are related to the fact that behaviorally inhibited children are at increased risk for developing an anxiety disorder (Rosenbaum, Biederman, Bolduc-Murphy, & Faraone, 1993). For example, a prospective study of behaviorally inhibited children indicated that, after three years, they exhibited higher levels of anxiety disorder symptoms in comparison to control children (Biederman et al., 1993). Moreover, an association has been found between behavioral inhibition in children and parental anxiety (Turner, et al.).

Despite the fact that temperament can be identified at an early age (e.g., by the age of 14 months), most researchers agree that temperament originates both from biological/genetic

influences and from environmental influences (Rapee, 2002). A review of twin studies conducted by Goldsmith and Lemery (2000) has suggested that behavioral inhibition is moderately heritable. Specifically, based on twin studies, up to 50% of the variance in temperament may be accounted for by genetics. Despite the consistent findings that heritability appears to play some role in the development of a behaviorally inhibited temperament, a large portion of the variance is unaccounted for by genetic factors alone. As a result, it seems likely that environmental variables also contribute significantly to the development of child temperament. The importance of the environment in the development of temperament is emphasized by a model developed by Thomas and Chess (1984). According to their model, an interaction occurs between a child's temperament and parental attitudes and practices. If the child's temperament corresponds well with parental attitudes and practices, the child is less likely to experience significant developmental difficulties. In contrast, if there is a poor match between the child's temperament and parental practices then developmental difficulties, such as anxiety, may result.

Parental Anxiety

Studies that examine the prevalence of anxiety among children whose parents have anxiety disorders (sometimes referred to as "top-down studies") have found that children with an anxious parent may be at increased risk for developing an anxiety disorder themselves (Ginsburg & Schlossberg, 2002). For example, up to 60% of anxious parents have children with an anxiety disorder, and research has indicated that children with anxiety disordered parents have been found to be seven times more likely to have an anxiety disorder, compared to a control group (Ginsburg & Schlossberg; Turner, Beidel, & Costello, 1987). Studies examining the prevalence

of anxiety in parents of children who present with an anxiety disorder (sometimes referred to as "bottom-up studies") have found that up to 80% of parents of children exhibiting significant anxiety symptoms have an anxiety disorder themselves (Ginsburg & Schlossberg).

Although anxiety disorders tend to run in families, the specific mechanism of anxiety disorder transmission from parent to child remains unknown, as top-down and bottom-up studies cannot be used to determine the extent to which an association between parent and child anxiety is due to heritability or due to the environment (Eley, 2001; Ginsburg & Schlossberg, 2002). In a review of the behavioral genetic research examining twin, sibling, and adoption studies, Eley concluded that there appears to be a genetic component explaining some of the etiological variance associated with the development of childhood anxiety disorders. According to Eley, though the magnitude of the genetic influence varies, the genetic influence likely accounts for approximately one-third of the variance.

Despite the role of heritability in the development of anxiety disorders, Eley (2001) concludes that, according to the behavioral genetic research, shared-environmental influences also appear to play a significant role in the development of childhood anxiety disorders. The role of the environment in the development of anxiety is further supported by the finding that the genetic influence associated with the transmission of anxiety to children from their parents does not appear to be disorder specific (Eley). For example, the rates of both depression and anxiety are similar in parents of anxious children (Eley). These findings suggest co-occurrence of a psychiatric disorder between parents and children; that is, the disorder is often not specifically an anxiety disorder. What may actually be inherited may be more of what has been referred to as a "general neurosis" (Andrews, 1996). Given this, environmental variables may play an essential role in shaping the development of *specific* childhood anxiety disorders (Rapee, 2002). Of

particular interest to clinical researchers regarding potential environmental influences is the role of parental behaviors in the development of childhood anxiety disorders.

Parental Behaviors: Control and Rejection

Consistent evidence suggests that parental behaviors are involved in the development of childhood anxiety disorders (Rapee, 1997; 2002). The two primary parenting variables that appear to be most commonly associated with childhood anxiety are control/overprotection and rejection/lack of warmth (Rapee). Studies examining these variables have varied greatly in their methodology and have relied on data obtained from observational situations, parent-reports, child-reports, and adult retrospective recall of their parents' behaviors.

The operational definition of parental control also has varied among researchers. Parental control generally has been defined as granting minimal autonomy to a child, behavior that is intrusive, constraining a child's individuality, use of excessive commands or instructions, and restriction of a child's behavior (Ginsburg & Schlossberg, 2002). Irrespective of the operational definition used, observational studies have found that higher levels of parental control are associated with anxiety in children (Dumas, LaFreniere, & Serketich, 1995; Hudson & Rapee, 2001; Siqueland, Kendall, & Steinberg, 1996; Whaley, Pinto, & Sigman, 1999). Studies examining retrospective recall of parenting behavior also have consistently indicated that anxious participants recall higher levels of parental control (Rapee, 1997). Despite some evidence supporting the role of parent control in the development of child anxiety, findings from studies relying on parent- and child-report have been less consistent (Gurner, Muris, & Merckelbach, 1999; Lieb et al., 2000; Mattanah, 2001; McClure, Brennan, & Hammen 2001;

Muris, Meesters, Merckelbach, & Hulsenbeck, 2000; Pederson, 1994; Rubin, Cheah, & Fox, 1999; Siqueland, Kendall, & Steinberg; Wood, McLeod, Sigman, Hwang, & Chu, 2003).

The other parenting variable commonly associated with child anxiety—criticism/rejection—also has been investigated fairly extensively, including a highly similar construct referred to as parental warmth. Parental criticism has been operationalized as behavior including expressed emotion that is disapproving, judgmental, dismissive, and critical (including expressed emotion) (Ginsburg & Schlossberg, 2002). In contrast, parental warmth has been operationalized in variety of ways, with relevant descriptors including positive affect, expression of affection, demonstration of positive regard for the child, recognition of children's feelings, and smiling and laughing. Although criticism and warmth have been discussed as disparate variables, it is feasible to describe these variables as opposite ends of a continuum for a single dimensional construct (i.e., criticism/lack of warmth and acceptance/warmth [Rapee, 2002]).

With the exception of one study (Siqueland, Kendall, & Steinberg, 1996), various studies using observational methods have found criticism to be associated with child anxiety (Dadds, Barrett, Rapee, & Ryan, 1996; Dumas et al., 1995; Hibbs et al., 1991; Hudson & Rapee, 2002; Siqueland et al.; Whaley et al., 1999). As with parental control, studies examining retrospective recall of parenting behavior also have found that anxious participants generally recall higher levels of parental criticism/rejection (Rapee, 1997). Researchers also have examined the association between parental criticism/rejection and child anxiety through both parent- and child-report, and these studies have yielded inconsistent results (Wood, et al. 2003). Overall, it appears that parental criticism may be a less consistent predictor of child anxiety than parental control (Rapee, 1997; Hudson & Rapee, 2002).

Despite the research examining the association between parental behavior and child anxiety, there is a paucity of research examining the association between parenting variables and child anxiety as a function of ethnicity or culture. Scott, Scott, and McCabe (1991) examined this question in a number of countries (e.g., Australia, China, United States, Germany, Japan and Taiwan) and found that parental criticism significantly correlated with adolescent anxiety irrespective of nationality. In a study using the self-reports of Hispanic children, Hernandez-Guzman & Sandez-Sosa (1996) also found that parental criticism correlated with child anxiety. These studies provide preliminary support for the possibility that parental criticism predicts child anxiety across cultures.

Learning Anxious Behaviors from Parents

In addition to parental control and criticism correlating with child anxiety, child anxiety may be learned from parental behaviors. Although not always discussed as distinct categories in the literature, three mechanisms of learning may be associated with a child's development of anxiety. These categories include: (a) parental modeling; (b) instructional learning; and (c) parental reinforcement of anxious/avoidant behavior (Beidel & Turner, 1998; Rapee, 2002). Despite the importance of examining these parental behaviors, few studies have investigated the role of learning in the development of child anxiety, likely because of the inherent difficulty of studying learning in this context.

Consistent with social learning theory (e.g., Bandura & Walters, 1963), child anxiety may be learned through parental modeling of anxious behavior, which also has been described as observational learning or vicarious learning of anxious behavior (Beidel & Turner, 1998; Rapee,

2002). With parental modeling of anxious behavior, children may observe anxious behavior by their parent(s), and as a result of this observation, acquire a general sense of fear, a fear of specific stimuli, or a fear of situations feared by the parent. For example, an association has been found between parents who report being anxious in front of their children and elevated levels of anxiety in the children (e.g., Muris, Steernmen, Merckelbach, & Meesters, 1996). In addition to acquiring fear through parental modeling, it is feasible conceptually that children also may vicariously learn avoidance from their parents as a coping strategy with anxiety provoking situations. In addition to the modeling of general fears, research has suggested that modeling may play a role in the development of specific anxiety disorders. In particular, modeling may influence the development of social anxiety disorder (Bruch & Heimberg, 1994; Caster, Inderbitzen, & Hope, 1999; Ost & Hughdahl, 1981). For example, Ost and Hughdahl found that 13% of individuals with social anxiety disorder reported that they learned social fears vicariously from their parents. Further, somatic symptoms associated with panic disorder may be acquired through parental modeling (Ehlers, 1993; Watt & Stewart, 2000; Watt, Stewart, Cox, 1998).

The second type of learning that may be associated with the development of child anxiety is instructional learning or information transfer (Beidel & Turner, 1998; Rapee, 2002). Beidel and Turner report that this type of learning has been the least studied form of learning of anxious behaviors. According to the concept of instructional learning, the parent of an anxious child may communicate messages to the child regarding the child's safety, well-being, and about situations that should be avoided due to potential harm. Although the messages are intended to protect the child, the parent may be communicating a level of danger that exceeds the actual threat from these situations. For example, Beidel and Turner found that when anxious children are playing,

their parents tend to communicate anxious messages such as “be careful” and “don’t climb too high.”

Three relevant points deserve brief discussion. First, although it is tempting to infer that cautionary statements made by parents may cause child anxiety, the direction of causality is uncertain. It may be that anxious children elicit these cautionary statements from their parents. Children who manifest a fearful or anxious demeanor may lead to extra vigilant and protective parenting. Second, a distinction must be made between vicarious versus instructional learning. With vicarious learning, the child observes a parent who is displaying anxious behavior (e.g., physical signs of anxiety, parental messages regarding their own anxious thoughts, or parental modeling of avoidant behavior). In contrast, instructional learning includes direct messages to the child about situations the child should fear or avoid. The parent may inadvertently or intentionally be communicating to the child the global message that the world is a dangerous place. Finally, a degree of negative information transfer is necessary, as it is important for parents to sometimes communicate cautionary statements to their children so that their children are not harmed. In other words, some negative information transfer is normal, necessary, and may be indicative of healthy child development and responsible parenting. However, excessive communication of these messages, in frequency of intensity, may be associated with child anxiety.

The third type of learning that may be associated with children’s anxiety is the reinforcement of anxious/avoidant behaviors. Parents may support, assist in, and reward children’s avoidant behavior. This behavior includes attempts made by parents to protect their children from anxiety-provoking situations or comfort a child who appears anxious in a particular situation (Rapee, 2002). For example, a parent may remove a child from a situation,

support and encourage a child's avoidance of anxiety-provoking situations, such as allowing a child to stay home from a social event or school; or the parent may attempt to reduce a child's distress with special treatment, such as providing rewards or permitting avoidance of responsibilities. This parental behavior may be problematic because these attempts to comfort and reduce children's anxiety may be both positively and negatively reinforcing. This type of behavior has been found in observational studies. In particular, Dadds et al. (1996) found that parents of anxious children were more likely to support and agree with avoidant responses to hypothetical situations than parents of oppositional or nonclinical children.

A relatively small number of studies have attempted to investigate whether child anxiety may be learned from parental behavior. Observational studies in a laboratory setting have found that parents of anxious children influence their children's responses to ambiguous situations (Barrett et al., 1996; Chorptia, Albano, & Barlow, 1996; Shortt, Barrett, Dadds, Fox, 2001). In addition, parents of anxious children have been found to report higher levels of distress when compared to parents of nonanxious children suggesting that the parents may be modeling anxiety (Turner, Beidel, Roberson-Nay, & Tervo, 2003). Moreover, studies based on children's self-reports also have indicated that anxious parental behaviors (which may include components of the learning mechanisms) may be associated with child anxiety (Caster et al., 1999; Gurner et al., 1999; Muris et al., 2000). Further, adult retrospective recall of their parents' behaviors has suggested that anxiety may be learned from parents (e.g., Bruch & Heimberg, 1994; Watt & Stewart, 2000).

Overall, despite speculation for the hypothesis that children learn anxiety from their parents through at least three mechanisms (i.e., modeling, instructional learning, and reinforcement of avoidant/anxious behavior), it appears that research in this area has been is

sparse. Few studies have attempted to examine parental report of behaviors that may be associated with child learning anxiety from their parents (Wood et al., 2003). Further, studies rarely distinguish between the three mechanisms of learning discussed above, and these three mechanisms rarely are examined within the same study. As a result, little is known about the association between these mechanisms, the relative contribution of each of these mechanisms to the development of child anxiety, and the degree to which these mechanisms can be distinguished from one another. With the exception of research on the learning of panic-related symptoms, there are no published studies that specifically attempt to examine the relation between childhood anxiety and the three mechanisms of learning discussed above (e.g., Watt & Stewart, 2000).

Culture and Childhood Anxiety: The Case of Hispanics

The aforementioned constructs (i.e., parental anxiety, temperament, and parental behaviors) have been fairly well researched as risk factors for the development of childhood anxiety among non-Hispanic White children. However, with the exception of a few studies (Hernandez-Guzman & Sandez-Sosa, 1996; Scott, Scott, & McCabe, 1991), there appears to be a paucity of research examining the degree to which these constructs are associated with anxiety in other cultural or ethnic groups. In particular, little is known about the comparative etiology associated with the development of child anxiety disorders in Hispanic children as compared to White children.

This is particularly relevant given that Hispanic Americans now constitute the largest ethnic minority in the United States (U.S. Census Bureau, 2002). Moreover, the growth of the Hispanic population is projected to continue well into the middle of the 21st century (U.S. Census

Bureau, 1998). From a research perspective, the increased presence of Hispanics creates a valuable opportunity to test hypotheses using a comparative approach in order to determine if behavioral phenomena observed in one culture, such as within the mainstream, White culture, generalize to other cultures (in this case, the Hispanic American culture).

One way in which Whites and Hispanics can be compared is by the prevalence of anxiety disorders in members of each of these cultural groups. Differences in prevalence rates of anxiety between these groups would suggest that one of the groups may be at increased risk for developing an anxiety disorder. Large-scale epidemiological studies have examined the prevalence rates of DSM based disorders, including anxiety disorders, across cultures, and a recent report by the Surgeon General provides a comprehensive summary of these findings (Office of the Surgeon General, 2001). Specifically, a comparison of Mexican Americans and White Americans found that Mexican Americans had similar, or even slightly lower, lifetime prevalence rates of anxiety disorders, 23.7% versus 25.0% respectively. This finding has been supported by other studies that have found that prevalence, level, and types of anxiety-related symptoms in both groups were generally similar (Ginsburg, & Silverman, 1996; Karno et al., 1987; Vega et al., 1998). However, other studies have found higher levels of anxiety-related symptoms in Hispanic children compared to White children (Glover, Pumariega, Holzer, Wise, & Rodriguez, 1999; Varela et al., 2004). Specifically, Hispanic children appear to be more likely to report anxiety-related physical symptoms (Silverman, La Greca, & Wasserstein, 1995; Varela et al., 2004). These inconsistent results highlight a major limitation to comparisons of anxiety across cultures is that the diagnostic criteria for anxiety do not account for cultural variations in the expression of these disorders (Office of the Surgeon General, 2001). Overall, the above studies have yielded inconsistent results. However, it appears that Hispanic children may be at

increased risk for the development of psychopathology including anxiety. Despite the fact that this group may be at particular risk for the development of child anxiety, knowledge about the child anxiety in Hispanic children living in the United States is limited (Bird, 1996).

Cultural differences in family environment between Whites and Hispanics are presumed to exist. Specifically, parenting patterns among some Hispanic families appear to differ from those of White families (Harwood, Leyendecker, Carlson, Asencio, & Miller, 2002; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Varela et al., 2004). One specific difference is that mainstream, White culture tends to be individualistic, whereas, traditional Hispanic cultures tend to be collectivistic. Harwood et al. argue that this dimension represents "a primary aspect of the cultural context of childhood in this country" (p. 24). This difference may influence discrepant family environment and parenting styles between the two cultural groups. More specifically, it is possible that Hispanic parents differ from White parents in their level of control/granting of autonomy, as it may be more typical of Hispanic parents, who may be relatively collectivistic, to provide less autonomy to their children relative to White parents. This notion has been supported by research which has indicated that, when compared to White families, Hispanic families exert relatively higher levels of direct control over their children both within and outside of the family (Bulcroft, Carmody, & Bulcroft, 1996; Dornbusch et al.; Fuligni, 1998; Harwood et al.; Varela et al.; Vega, 1990). However, these findings have been mixed as other research has found similar levels of control in both groups (Barker, Melgroza, Roll, Quinlan, & Blatt, 1997; Freeman & Newland, 2002).

Related to the concept of control, both the theoretical and empirical literature indicate that, relative to White parents, many Hispanic parents place a high value on socializing their children to be *bien educado* (Fontes, 2002). That phrase refers to being respectful and well behaved in

social settings, and this culturally prescribed parental value may influence the relationship between parental behavior and child anxiety by adding additional pressure to Hispanic children to conform to behavioral standards. Moreover, such pressures might particularly affect children already predisposed to develop anxty disorders.

Finally, on average, Hispanic parents have more children than White parents (U.S. Census Bureau, 2002). The research on parenting and family size has found that parents with a relatively large number of children exert more behavioral control over their children than parents with a relatively small number of children (Patterson, 1982). This difference might reflect the increased need of parents with many children to maintain control and stability within the home. In summary, the association between parental control and the development of anxiety among Hispanic children may differ in some way than the association between these two constructs among White children. If that were to be the case, it would suggest that the association between parental control and child anxiety may vary as a function of culture.

CHAPTER TWO: RESEARCH DESIGN AND METHODOLOGY

The present study utilized two distinct population samples in pursuit of three research questions or goals. The purpose of collecting data from two population samples was to determine, with some confidence, the level of robustness of the study's findings. One population sample consisted of mothers from the community who reported their own relevant personality characteristics and parenting behaviors in reference to one of their children currently in their home, including their children's level of anxiety. The second population sample consisted of young adults attending college who were asked to retrospectively recall relevant aspects of their childhood, as well as indicate their level of anxiety as an adult.

One research goal of this study was to elucidate the variables associated with the development of anxiety in children. As discussed above, myriad variables have been identified in the empirical literature that seem to influence the development of childhood anxiety. However, this research is limited in that the identified variables (e.g., maternal anxiety, temperament, and parental behaviors) have not been examined simultaneously within a single study. Examining these variables conjointly may elucidate the unique contribution of each variable to the development of child anxiety, including how the variables may interact in the prediction of anxiety.

A second goal of this study was to examine the role of learning from parents as a factor associated with the development of child anxiety. There is a paucity of research examining transmission of anxiety from parents to children, and parental report of this behavior is particularly sparse (e.g., Wood et al., 2003). This study attempted to shed light on vicarious

learning, instructional learning, and reinforcement of avoidant behavior as three mechanisms that may be associated with the development of childhood anxiety.

The third goal of this study was to compare the predictor variables associated with anxiety between Whites and Hispanics. The degree to which risk factors associated with the development and maintenance of child anxiety generalize to cultures other than White cultures has important theoretical and clinical applications. In particular, the variables associated with the development and maintenance of childhood anxiety serve as the basis for the development and implementation of treatment and prevention programs. As a result, the application of treatment and prevention programs to Hispanic groups based on research examining White groups may or may not be effective. In this study, the ethnic comparison was examined in two ways. One, a comparison of the parenting behaviors of the two ethnic groups (i.e., White and Hispanic) independent of child anxiety was made. Two, the study provided a comparative analysis of how the aforementioned risk factors (i.e., parent behavior, parent anxiety, and temperament) predict anxiety in each ethnic group.

Hypotheses

Hypothesis 1

It was hypothesized that the variables considered to be relevant to the development of anxiety (e.g., maternal anxiety, temperament, maternal control and rejection, and behaviors related to child learning of anxiety) would significantly and conjointly predict anxiety. It is expected that successful prediction of anxiety would occur for both the children (based on their

mothers' concurrent reports) and the young adults (based on their retrospective recall). Testing this hypothesis was an initial step toward building a data-based model of the predictors associated with the development of child anxiety. Moreover, examining these variables simultaneously within the same study was deemed critical to delineating the relative importance of these variables as risk factors in the development of child anxiety.

Hypothesis 2

It was hypothesized that three types of learning (vicarious, instructional, and reinforcement of avoidant behaviors) would significantly predict anxiety in both young adults (based on retrospective report of their mothers' behavior) and children (based on maternal self-report). Simultaneous examination of the three types of learning was expected to shed light on the relative predictive ability of each type of learning. This hypothesis was made because researchers have speculated that these mechanisms of learning may be associated with the development of anxiety, and some studies have provided preliminary support for the role of learning in the development of child anxiety.

Hypothesis 3

It was hypothesized that parenting behaviors reported by White participants would differ significantly than parenting behaviors reported by Hispanic participants. Based on theoretical literature describing traditional Hispanic culture (e.g., Harwood et al., 2002; Hill, Bush, & Roosa, 2003), it was predicted that Hispanic parents would report exerting more control and

granting less autonomy to their children than White parents. Support for this hypothesis was expected for both the community sample of mothers and the young adults.

Hypothesis 4

The fourth hypothesis was that the set of variables predicting anxiety for Whites would differ from the set of variables predicting anxiety for Hispanics. Specifically, if control/restriction of autonomy is a cultural idea particularly valued by Hispanics (and therefore more common among the Hispanic sample in this study relative to Whites) perhaps heightened levels of control exerted over Hispanic children may not influence their levels of anxiety to the same degree as control/restriction of autonomy might influence anxiety among White children.

Methods

Participants

Two samples were examined. The first sample consisted of 333 mothers from the community (the goal was to obtain data from at last 160 mothers, including 80 White mothers and 80 Hispanic mothers). The ethnic distribution was as follows: White (*n* = 207 [62.2%]), Hispanic (*n* = 82 [24.6%]), African American (*n* = 33 [9.9%]), and Asian (*n* = 11 [3.3%]). Within the Hispanic sample, the break-down of Hispanic subgroups is as follows: Puerto Rican (*n* = 54 [13.6%]), Cuban (*n* = 10 [2.5%]), Central American (*n*= 10 [2.5%]), South American (*n*= 9 [2.3%]), and Mexican (*n* = 8 [2%]). The mean age of mothers was 35.56 (*SD* = 6.93), the

average number of children was 1.89 (*SD* = 0.91), and the average age of the target child was 9.12 (*SD* = 2.14). A more detailed description of demographic variables can be found in the results section.

The mothers eligible for the study were at least 18 years of age and had at least one child living at home who was in the age range of 6 to 12. They were asked questions about their own behavior, as well as about the behavior of their children. The mothers were recruited by undergraduate college students. In exchange for finding a mother to complete the packet, the student received extra credit. Students were prohibited from recruiting mothers from their own immediate families. Otherwise, they were free to draw on their own personal and organizational contacts in the community. An advantage to this sampling procedure was that it may have provided a wider range of participants from the community. This sampling may also have facilitated recruitment of Hispanic parents, as literature suggests that community members of minority groups sometimes have reservations about participating in research (Negy & Snyder, 1997; Okazaki & Sue, 1995).

The second sample consisted of approximately 470 young adults who were college students and at least 18 years of age (the goal was to recruit at least 250 young adults, with at least 50 Hispanic young adults). The ethnicity of the sample was as follows: White (*n* = 335 [71.3%]), Hispanic (*n* = 69 [14.7%]), African-American (*n* = 48 [10.2%]), and Asian (*n* = 18 [3.8%]). Within the Hispanic sample, the break-down of Hispanic subgroups is as follows: Puerto Rican (*n* = 29 [5.8%]), Cuban (*n* = 21 [4.2%]), Mexican (*n* = 10 [2.0%]), Central American (*n*= 6 [1.2%]), and South American (*n*= 3 [0.6%]). The sample consisted of 289 females (62.8%) and 171 males (37.2%). The average age of the sample was 18.78 (*SD* = 1.95). A more detailed description of demographic variables is reported in the results section. The

young adults completed the survey packets for extra credit. Specifically, they were asked to recall their own behavior as a child and the behavior of their mothers, as well as to report on their current levels of anxiety.

Measures

Demographic Form. Both of the population samples filled out a brief demographic form. Some of the information requested included age, ethnicity, gender, marital status, and employment status. A separate version of this form was developed for the sample of mothers (see appendix A) and for the young adult sample (see appendix B). All measures for the parent sample are presented in appendix A and all measures for the student sample are presented in appendix B. This study, including the survey packets, was reviewed and approved by the University of Central Florida Institutional Review Board (see appendix C).

Depression Anxiety Stress Scales. All participants in both samples were administered the 21-item version of the Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995), a measure designed to assess levels of anxiety, depression, and stress (appendices A and B). The DASS has demonstrated adequate reliability with internal consistency values ranging from 0.89 to 0.96 for the three scales and with two-week test-retest reliability values ranging from 0.71 to 0.81 (Brown, Chorpita, Korotitsch, & Barlow, 1997). In addition, the DASS has demonstrated adequate validity. Specifically, the anxiety subscale of the DASS has been found to correlate significantly with the Beck Anxiety Inventory (0.81) the depression subscale of the DASS has been found to correlate significantly with the Beck Depression Inventory (0.74; Lovibond & Lovibond, 1995). Further, the anxiety and depression subscales of the DASS have been found to

distinguish between clinically anxious and clinically depressed groups, and the stress subscale has been found to differentiate between those with generalized anxiety disorder and mood disorders from other anxiety disorders (Brown, Chorpita, Korotitsch, & Barlow). For more information about the development and validation of the DASS, see Anthony et al. (1998), Brown et al. (1997), and Lovibond and Lovibond (1995).

Revised Manifest Anxiety Scale-Parent Version. The Revised Manifest Anxiety Scale—Parent Version (RCMAS-P; Cole, Hoffman, & Tram, 2000) is a 28-item measure designed to assess parents' report of their child's anxiety (see appendix A). The response format includes a 3-point scale (yes, sort of, and no). The parent version is based on the items from the child self-report version of the RCMAS, a commonly used measure of child anxiety (Reynolds & Richmond, 1979). The items on the RCMAS-P were reworded so that they assessed parent's perceptions of their children's anxiety level. The RCMAS-P has been found to have three factors: (1) Social Alienation—indicating child loneliness and feelings of isolation; (2) Worry-Oversensitivity—indicating concern about evaluation from others, worries about performance, and future events; and (3) Sleep Disturbance—indicating sleep disturbance and general fear of the future (Cole et al.). The RCMAS-P was found to demonstrate convergent validity with children's ratings of their own symptoms (Cole et al.). This measure was administered to the parent sample only.

State-Trait Anxiety Inventory. The State-Trait Anxiety Inventory (STAI; Spielberger, 1983) is a 20-item measure of adult levels of anxiety. Consistent with the purpose of this study, the trait version of this measure was used. The trait version of this scale has demonstrated adequate test-retest reliability at 104 days for both males (.73) and for females (.77). Cronbach's alpha coefficients for the trait version of this scale also is high (.90). Further, the trait version of

the scale has demonstrated adequate concurrent, convergent, and divergent validity (Spielberger). The response options are on a 4-point Likert scale (i.e., almost never, sometimes, often, almost always). The young adult sample completed a modified form designed to measure their recall of parent anxiety (see Appendix B). For example, the item "I feel nervous and restless" was restated as "My mother felt nervous and restless." They also completed the original STAI in reference to themselves (see Appendix B). The parent sample completed the original version of the STAI.

The Sociability Subscale of the Child Temperament Questionnaire. The Child Temperament Scale (CTQ) was originally developed by Thomas and Chess (1977). Sanson, Smart, Prior, Overklaid, and Pedlow (1994) subjected the questionnaire to a factor analysis and arrived at a seven factor solution including a 9-item Approach/Withdrawal or Sociability factor (see appendix B). This factor has been considered as a measure of a shy, inhibited temperament (Sanson, Pedlow, Cann, Prior, & Oberklaid, 1996). For the purpose of the study, this measure is referred to as the Child Temperament Questionnaire- Sociability Scale (CTQ-S). According to Sanson et al. (1996), longitudinal data have suggested that the CTQ-S is stable over time. Specifically, the test-retest reliability was .71 for children tested once at 3-4 years-of-age and again at 5-6 years-of-age. Further, the internal consistency of this scale (Cronbach's alpha) has been found to be .84 for parental ratings of children aged 3-6. Construct validity has been established, as scores on this scale have been found to correlate with higher levels of anxiety and lower levels of aggression (Sanson, et al.). The response options are on a 7-point Likert scale ranging from "almost always" to "almost never." This form was completed by the sample of mothers.

Behavioral Inhibition Scale. The Behavioral Inhibition Scale (BIS; Muris et al., 1999) is a 4-item measure designed to assess behavioral inhibition (see appendix B). This measure has been found to demonstrate adequate concurrent validity as a self-report measure of adolescent behavioral inhibition, as the measure has been found to correlate significantly with current levels of anxiety (Muris, Merckelbach, Schmidt, Gadet, & Bogie, 2001; Muris et al., 1999; Muris & Meesters, 2002). Data supporting the reliability of this measure have not been reported. Response options are on a 4-point Likert scale (i.e., never, sometimes, often, always). This form was completed by the sample of mothers.

Retrospective Self-Report of Inhibition. The Retrospective Self-Report of Inhibition (RSRI; Reznick et al., 1992) is a 30-item self-report designed to measure recall of inhibition in childhood (see appendix A). This measure has demonstrated adequate reliability, with a Cronbach's coefficient alpha of .79. This measure was also found to demonstrate adequate construct validity. Specifically, the self-report version of the RSRI and a parent-report version of the RSRI were found to correlate significantly each other and with the participants' current levels of anxiety (Reznick et al.). All response options are on a 5-point Likert scale; however, specific response options differ based on the particular item. This form was completed by the young adult sample.

Parental Bonding Instrument. The Parental Bonding Instrument (PBI; Parker, 1983; Parker, Tupling, & Brown, 1979) is a 25-item measure of parenting behaviors. The PBI includes two factors: care (warmth) and overprotection (control). An example of a care/warmth item is "Made me feel I wasn't wanted." An example of a overprotection/control item is "Try to control everything he/she does." The PBI has demonstrated adequate test-retest reliability (Parker, 1979), and the PBI has demonstrated convergent validity with the EMBU (Swedish

acronym for Egna Minnen Betraffande Uppfortran- translated as "My Memories of Upbringing"), another commonly utilized measure of parental behavior (Arrindell, Gerlsma, & Vandereycken, 1998). Further, scores on the PBI have been found to correlate with anxiety symptoms (e.g., Cavedo & Parker, 1994; Parker, 1981; Rapee, 1997). The original of the PBI was administered to the young adult sample (see appendix B), and a modified version of the PBI was administered to the sample of mothers (see appendix A). Response options are on a 3-point Likert scale.

Child Learning of Anxiety Scale. The Child Learning of Anxiety Scale (CLOAS) is a 40-item scale developed by the present author specifically for the purpose of this study. The CLOAS is designed to assess three dimensions of children's learning of anxious behavior from their parents: Vicarious Learning, Instructional Learning, and Reinforcement of Anxious Behavior. One version of the CLOAS was developed to administer to the sample of mothers regarding their behavior with their children (see appendix A), and a second version of the CLOAS was developed for the young adult sample as a retrospective measure of their mothers' behavior (see appendix B). Items were derived from conceptual reviews of the role of parental behavior in the development of child anxiety (Biedel & Turner, 1998; Ginsburg & Schlossberg, 2002; Muris et al., 2000; Rapee, 2002). Response options are on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." Both versions of this measure were subjected to an exploratory factor analysis, and a reliability analyses were performed. A three factor solution was obtained for each version of the measure and each factor exhibited adequate internal consistency. The details of these analyses are discussed on the results section, and the obtained factors were utilized in subsequent analyses as potential predictors of child anxiety.

Marlowe-Crowne Social Desirability Scale. All participants completed the Marlowe-Crowne Social Desirability Scale Form C (MCSDS; Reynolds, 1982). This is a 13-item abbreviated version of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). This scale is designed to measure attempts by participants to be perceived in a positive manner (see appendices A and B). The internal consistency for the abbreviated scale has been found to be .76 (Reynolds). This form also was found to be correlated significantly with the standard, 33-item version of the Marlowe-Crowne Social Desirability Scale (r = .93) and with the Edwards Social Desirability Scale (r = .41). Response options for this scale are dichotomous (true or false). For more information of the development and validation of the MCSDS, see Crowne and Marlowe (1960) and Reynolds (1982).

Readjustment Rating Scale. All participants completed the Readjustment Rating Scale (RRS; Holmes & Rahe, 1967). This is a measure designed to evaluate the occurrence of 43 life events commonly reported as stressful (see Appendix A and B). Items were ranked and weighted based on the level of change required in a person's life as a result of the life event. Scully, Tosi, and Banning (2000) provided more contemporary rankings and weights for the 43 life events, and they found that the life events listed on the scale to be significantly correlated with participant self-report of their levels of stress. For the purpose of this study, 15 of the items on the Readjustment Rating Scale (RRS) was utilized as a brief measure of current stressors occurring in participants' lives. Based on the rankings from Scully, Tosi, and Banning, the top 15 life events requiring the most readjustment were included. Participants were asked to indicate if the event had occurred over the past 12 months by placing a check next to the event. A total was tabulated for the number of events that the participant had experienced over the past 12 months (scores can range from 0 to 15).

Bidimensional Acculturation Scale. All Hispanic participants completed the Bidimensional Acculturation Scale (BAS; Marin & Gamba, 1996). This is a 24-item measure designed to measure Hispanics' acculturation into American culture (see Appendices A and B). The scale includes three subscales: Language Use, Linguistic Proficiency, and Electronic Media. The BAS has demonstrated adequate reliability in Hispanic samples, with Cronbach's alphas ranging from .97 to .81 (Marin & Gamba). The scale also has demonstrated concurrent validity, as scores on the BAS have been found to correlate with scales commonly used as criteria for validating acculturation measures (Marin & Gamba). For example, the BAS was found to correlate significantly with the Short Acculturation Scale for Hispanics (SASH).

Design and Procedure

Participants in both samples (mothers and young adults) first completed an informed consent form. Participants were then asked to complete a brief demographic sheet as well as a set of questionnaires containing the measures discussed above. All measures were administered in English only. Once the measures were completed, the participants were debriefed and thanked for their participation.

CHAPTER THREE: RESULTS

Parent Sample

Reliability Analysis & Mean Comparisons between Ethnic Groups

Cronbach's alphas were conducted separately by ethnicity on each of the measures and subscales to examine internal consistency (see Table 1). Although most measures and subscales demonstrated adequate internal consistency (i.e., alphas of .70 or greater), the MCSDS yielded marginally acceptable internal consistency for the White mothers ($\alpha = .68$). Further, the PBI-Control subscale had marginally acceptable ($\alpha = .69$) internal consistency for White mothers and unacceptably low ($\alpha = .32$) internal consistency for Hispanic mothers. As a result, the PBI-control subscale was excluded from subsequent analyses. Cronbach's alphas were not conducted for the RRS, as items were not anticipated to be correlated.

Sociodemographic Variable Analysis

A multivariate analysis of variance (MANOVA) was conducted to determine if the White and Hispanic mothers differed significantly on demographic variables and potential covariates. Ethnicity (White vs. Hispanic) of the mother was the independent variable (IV), and age of mother, mother's level of education, number of children living at home, extent to which the target child was raised by extended family, the age of target child, the Readjustment Rating scale

(RRS), Bidimensional Acculturation Scale—European American Orientation (BAS-E), Bidimensional Acculturation Scale—Hispanic Orientation (BAS-H), and the Marlowe-Crowne Social Desirability Scale (MCSDS) served as the dependent variables (DVs) (see Table 2). Based on a Wilks' Lambda significance test, ethnicity was associated with a significant effect, F (9, 271) = 107.82, $p < .001$, $\eta^2 = .78$. Univariate tests indicated that the two ethnic groups differed significantly on: mother's education, RRS, BAS-E, BAS-H, and MCSDS. Specifically, when compared to White mothers, Hispanic mothers reported lower levels of education (White mothers' M = 4.61 [SD = 0.89], Hispanic mothers' M = 4.21 [SD = 1.07], F [1, 279] = 10.31, $p < .05$, $\eta^2 = .036$), higher scores on the RRS (White mothers' M = 1.42 [SD = 1.56], Hispanic mothers' M = 2.00 [SD = 1.89], F [1, 279] = 6.24, $p < .05$, $\eta^2 = .022$), higher scores on the BAS-H (White mothers' M = 13.87 [SD = 3.87], Hispanic mothers' M = 36.35 [SD = 8.38], F [1, 279] = 929.62, $p < .001$, $\eta^2 = .80$), lower scores on the BAS-E (White mothers' M = 47.09 [SD = 2.50], Hispanic mothers' M = 41.81 [SD = 6.45], F [1, 279] = 97.80, $p < .001$, $\eta^2 = .26$), and higher scores on the MCSDS (White mothers' M = 20.21 [SD = 3.05], Hispanic mothers' M = 21.54 [SD = 3.03], F [1, 279] = 11.29, $p < .01$, $\eta^2 = .039$). It is noteworthy that although there was considerable variability in the scores on the BAS among Hispanic participants, on average Hispanics scored higher on the European Acculturation subscale (M = 41.81, SD = 6.45) when compared to the Hispanic Acculturation scale (M = 36.35, SD = 8.38). This suggests that the Hispanic sample is significantly acculturated to "mainstream," European-American culture.

White and Hispanic mothers also were compared on categorical demographic data through a series of chi-square analyses. These demographic variables included: percentage of families of mixed ethnicity (i.e., ethnicity of father differs from that of the mother), gender of the target child, and marital status. A chi-square test indicated that the two groups of mothers did not differ

significantly on marital status, χ^2 (3) = 1.83, p = *ns* (see Table 3). However, the two groups of mothers differed significantly on the percentage of girls in each sample (White sample = 52.0%, Hispanic sample = 37.9%, χ^2 (1) = 4.81, $p < .05$), and on the percentage of families of mixed ethnicity (White sample = 4.4%, Hispanic sample 18.9%, χ^2 (1) = 16.24, $p < .001$). Data from families of mixed ethnicity were excluded from subsequent analyses specifically comparing the White and Hispanic samples. Further, based on the above mentioned MANOVA and chi-square analyses, subsequent regression analyses included the following variables as covariates: mother's education, RRS, BAS-E, BAS-H, and MCSDS.

Pearson r correlations were conducted to examine the association between demographic variables and the Revised Children's Manifest Anxiety Scale (RCMAS), the primary dependent variable. Demographic variables significantly associated with child anxiety were considered as covariates in subsequent analyses (see Table 4). In the White sample, the extent to which other family members assist in raising the child, r (205) = -.14, $p < .05$, and levels of stress, r (205) = -.24, $p < .01$, were the demographic variables significantly associated with child anxiety. The following demographic variables were significantly associated with child anxiety in the Hispanic sample: BAS-E, r (89) = .25, $p < .05$, number of children living at home, r (89) = -.26, $p < .05$, and gender of target child, r (89) = .26, $p < .05$. No other correlations between the RCMAS and demographic characteristics were significant in either sample, and there were no significant differences between the strength of the correlations between demographic variables and anxiety in the White and Hispanic samples. Demographic variables significantly associated with child anxiety were entered as covariates in subsequent regression analyses.

A multivariate analysis of covariance (MANCOVA) was conducted to determine if the White and Hispanic mothers differed significantly on parent-report measures. Ethnicity (White

vs. Hispanic) of the mother was the independent variable (IV), and the dependent variables were: CTQ, PBI-Care, RCMAS, and DASS-A (see table 5). The covariates were based on the above MANOVA of demographic variables which included: mothers' education, RRS, BAS-E, BAS-H, and MCSDS. There were no overall significant differences between groups, F (4, 244) = 0.23, *ns*.

Analysis of the Child Learning of Anxiety Scale (CLOAS)

The Parent Version of the CLOAS was subjected to an exploratory factor analysis through a principal axis analysis. Based on the scree plot and item analysis of the factors, a three-factor solution was retained. Items with factor loadings of .3 or greater on only one factor were retained, and using this criteria, 35 of the 40 items on the scale were included in the final version of this measure (see Table 6). The first factor included 11 items. These items appear to measure maternal modeling of both anxious and non-anxious behaviors (labeled *CLOAS-Modeling*). Cronbach's alpha for the CLOAS-Modeling factor was .78 and .75 for White and Hispanic mothers, respectively. The second factor included 12 items and appears to measure maternal reinforcement of anxious behaviors and negative information transfer (labeled *CLOAS- Anxious Parenting*). Cronbach's alpha for this factor was .71 and .76 for White and Hispanic mothers, respectively. The third factor included 12 items and appears to measure reinforcement of non-anxious behaviors and positive information transfer (labeled *CLOAS- Non-Anxious Parenting)*. Cronbach's alphas for this factor were .80 and .75 for the White and Hispanic mothers, respectively.

Hypothesis 1

The first hypothesis was that the variables considered relevant to the development of anxiety (i.e., marital anxiety, child temperament, maternal warmth, and behaviors related to child learning of anxiety) would conjointly and uniquely predict child anxiety. A simultaneous multiple regression was conducted to test this hypothesis. The predictor variables were: the DASS-A (a measure of maternal anxiety); the CTQ (a measure of inhibited, shy temperament); the warmth subscale of the PBI (a measure of maternal warmth and care), and the three subscales of the CLOAS (measures of maternal behaviors hypothesized to be associated with children learning anxiety from their mothers). Child anxiety, as measured by the total score on the RCMAS, was the criterion variable. The following covariates also were entered into the regression equation: level of mother's education**,** number of children living in the home, the extent to which others raise the target child, social desirability, acculturation, and levels of maternal stress. Results indicated that the overall regression model was significant, F (13, 272) = 11.96, $p < .01$, $R^2 = .36$ (see Table 7). Four of the six variables were found to be significant predictors of scores on the RCMAS: DASS-A ($\beta = -.18$, $p < .01$), CTQ ($\beta = -.23$, $p < .001$), PBI-Warmth ($\beta = .13$, $p < .05$), and the CLOAS-Modeling ($\beta = -.18$, $p < .01$). These findings indicated that mothers' report of their own levels of anxiety, child temperament, maternal warmth, and maternal modeling of anxiety were uniquely and significantly associated with child anxiety.

Hypotheses 2

The second hypothesis was that three types of learning of anxiety (based on the CLOAS) would significantly predict child anxiety, based on scores on the RCMAS, and would be significantly associated with maternal anxiety. To test the first part of this hypothesis, a simultaneous multiple regression analyses was conducted, with each of the CLOAS subscales (CLOAS-Modeling, CLOAS- Anxious Parenting, and CLOAS- Non-Anxious Parenting) entered as predictor variables. RCMAS was the criterion variable. The overall model was significant, F (3, 337) = 10.97, $p < .001$, $R^2 = .09$, and the CLOAS-Modeling was the only significant predictor of the RCMAS, $\beta = -.28$, $p < .001$. These results indicate that maternal modeling was significantly and positively associated with child anxiety, suggesting that higher levels of parental modeling are associated with higher levels of child anxiety.

Based on Holmbeck's (2002) recommendations for post-hoc probing, the regression analysis was repeated with the addition of the interaction terms between the CLOAS-Modeling and CLOAS- Non-Anxious Parenting (CLOAS-Modeling x CLOAS- Non-Anxious Parenting) and CLOAS-Modeling and CLOAS- Anxious Parenting (CLOAS-Modeling x CLOAS- Anxious Parenting) to determine the presence of moderational effects. The overall model was significant, F (5, 335) = 8.63, $p < .001$, $R^2 = .11$, and the significant predictors included the following: CLOAS-Modeling, $\beta = 1.14$, $p < .05$, CLOAS- Anxious Parenting , $\beta = .56$, $p < .05$, CLOAS-Non-Anxious Parenting , $\beta = .50$, $p < .05$, CLOAS-Modeling x CLOAS- Non-Anxious Parenting interaction, $\beta = -1.06$, $p < .05$, and CLOAS-Modeling x CLOAS- Anxious Parenting interaction, $\beta = -.89$, $p < .05$ (see Table 8). When the interaction terms were added, both subscales and their interactions with modeling significantly predicted child anxiety, suggesting

that the association between CLOAS- Non-Anxious Parenting and CLOAS- Anxious Parenting are conditional on CLOAS-Modeling. These findings indicate that modeling may mediate the association between both the CLOAS- Anxious Parenting and CLOAS- Non-Anxious Parenting and child anxiety.

To further interpret the interaction between maternal modeling and the CLOAS- Anxious Parenting (i.e., the nature of the moderational relationship between these two variables), two additional regression analyses were conducted. The first analysis included high scores on the CLOAS-Modeling scale (modeling scores were centered at one standard deviation above the mean), and the second analysis included low scores on the CLOAS-Modeling Scale (modeling scores centered one standard deviation below the mean). These analyses allow for the interpretation of the association between the CLOAS- Anxious Parenting and anxiety at lower and higher levels of parental modeling of anxious behaviors. Based on these analyses, under lower levels of maternal modeling, the CLOAS- Anxious Parenting did not appear to be associated with child anxiety. However, under higher levels of maternal modeling, the CLOAS-Anxious Parenting was associated with higher levels of anxiety (see Figure 1). In other words, scores on the CLOAS- Anxious Parenting are only associated with child anxiety when they occur in the presence of higher levels of parental modeling of anxiety. In particular, the combination of high levels of maternal modeling and high scores on the CLOAS- Anxious Parenting appear to predict particularly high levels of child anxiety.

The above procedures were repeated to examine the moderational relationship between parental modeling and the CLOAS- Non-Anxious Parenting. Interestingly, a similar but reciprocal relationship between maternal modeling and scores on the CLOAS- Non-Anxious Parenting was found. Specifically, under higher levels of maternal modeling, there was no

association between the CLOAS- Non-Anxious Parenting and child anxiety. However, under lower levels of parental modeling the CLOAS- Non-Anxious Parenting appeared to be associated with child anxiety. In other words, scores on the CLOAS- Non-Anxious Parenting are only associated with child anxiety when they occur *with* lower levels of maternal modeling of anxiety (see Figure 2). Specifically, the combination of low levels of maternal modeling and low scores on the CLOAS- Anxious Parenting appear to predict particularly low levels of child anxiety.

Examination of the association between the CLOAS and maternal anxiety. To test the second part of this hypothesis, the three subscales of the CLOAS were regressed on mothers' self-report of their own anxiety. Maternal anxiety, as measured by the DASS-A, was entered as the criterion variable. The overall model was significant, F (3, 338) = 10.51, $p < .001$, $R^2 = .085$, and both the CLOAS-Modeling ($\beta = -1.06$, $p < .05$) and CLOAS- Non-Anxious Parenting subscales ($\beta = .11$, $p < .05$) were significantly associated with maternal anxiety (Table 9). These findings suggest that maternal modeling and positive maternal behaviors (i.e., positive information transfer and reinforcement of non-anxious behaviors), are associated with maternal anxiety. Specifically, higher levels of maternal anxiety are associated with higher levels of maternal modeling. Further, higher levels of maternal anxiety are associated with higher levels of communication of non-anxious information and reinforcement of non-anxious behaviors.

Modeling as a mediator between parent and child anxiety. Although not a specific hypothesis, the significant associations between maternal anxiety and maternal modeling and between maternal modeling and child anxiety, suggest that maternal modeling may mediate the association between maternal and child anxiety. Based on these findings, an analysis was conducted to determine if maternal modeling (as measured by the DASS-A) significantly mediated the association between maternal and child anxiety (Holmbeck, 2002). Results

demonstrated that the mediational pathway was significant, indicating that modeling was a partial and significant mediator of the association between maternal modeling and child anxiety (*B* [indirect effect] = .15, $z = 3.02$, $p < .001$). These findings suggest that a portion of the variance accounting for the association between maternal anxiety and child anxiety is mediated by parental modeling (see Figure 3).

Hypothesis 3

The third hypothesis was that Hispanic and White mothers would differ on self-report of their levels of control over their children, as measured by the PBI-Control subscale. Due to the poor reliability of control subscale of the PBI, a meaningful mean comparison between the two groups on this scale was not possible. However, additional analyses of the psychometric properties of the PBI in both samples yielded intriguing results. These results are reported here because they lay some foundation to the analysis in the fourth hypothesis below.

First, confirmatory analyses were conducted, comparing the data from the current White and Hispanic mothers to the original factor structure of the PBI. The confirmatory factor analysis, comparing the data from the White sample to original structure of the PBI, indicated that 3 of the 25 items did not load significantly on their respective factors (i.e., warmth or control). The analysis was repeated with the removal of the three items (1 warmth item and 2 control items). The model, after the removal of the three items, yielded mixed results. Two fit indices indicated that the data were a good fit with the modified model of the PBI ($\chi^2/df = 2.08$ and RMSEA = .08); however, other fit indices indicated that the data were less than an optimal fit of the modified model (GFI = .82, NFI = .61). Based on the chi-square to degrees of freedom

ratio, the RMSEA, and the observation that all manifest variables loaded significantly on respective latent variables, the model was retained. The modified model yielded slight increases in subscale reliability when compared to the original model. Specifically, Cronbach's alphas for the warmth subscale improved from .79 to .81, and for the control subscale the data improved from .69 to .71.

Based on the original factor structure of the PBI, a confirmatory factor analysis of data from the Hispanic sample indicated that the original factor structure was generally a poor fit with the data GFI = .67 and AGFI = .61. Although other fit indices indicated good fit with the data (RMSEA = .91 & $\chi^2/df = 1.69$), nine of the 25 items did not load significantly on their respective factors. Specifically, all of the non-significant loadings corresponded with the control factor, as only 4 of the 13 items loaded on this factor. This finding is consistent with the low aforementioned Cronbach's alpha for the control factor in the Hispanic sample ($\alpha = .32$).

Due to the poor fit of the Hispanic sample data with the original factor structure of the PBI, an exploratory factor analysis was conducted to determine the factor structure of the PBI within this sample. Based on the scree plot and an item analysis of the factor loadings, a two factor solution was retained (Table 10). The first factor was similar to the warmth factor of the original PBI, and the second factor was similar to the control factor of the original PBI.

An item analysis of the new warmth factors, indicated that eight items (i.e., with factor loadings of .3 or greater) were retained on the new PBI warmth factor. When compared to the original 12 item warmth subscale of the PBI, six of the original warmth items loaded significantly on the new warmth factor and were retained on the new factor; however, six of the original warmth items loaded significantly on the new control factor. Cronbach's alpha for the new warmth factor was .77. An item analysis of the new control factor, indicated that eleven

items (i.e., with factor loadings of .3 or greater) loaded significantly on this factor. When compared to the original 13 item control scale, five of the original control items loaded significantly and were retained on the new control factor, two items loaded on the new warmth factor, and six items were deleted due to insufficient factor loadings. Cronbach's alpha for the new control variable was .70.

Based on the above findings, the new factor structure of the PBI in the White sample was contrasted with the new factor structure of the PBI for the Hispanic sample. To understand the differences between these new, modified versions of the PBI in each sample, it is noteworthy that each factor of the PBI has items that are scored in opposite directions (i.e., reverse-scored items). In the case of the warmth scale, six items suggest warm and friendly maternal behavior (e.g., speak to my child in a warm or friendly voice), and six items indicate a "lack of warmth" on the part of the mother or "cold" maternal behavior (e.g., seem emotionally cold to my child). Interestingly, all six items consistent with warm and friendly behavior loaded significantly on the new versions of the warmth factor in both the White and Hispanic mother samples. However, all six items suggesting a lack of warmth loaded significantly on the control factor only for the Hispanic sample. In contrast, a majority of original lack of warmth items (i.e., 4 of the 6) loaded on the warmth factor in the current White sample (a finding generally consistent with the original factor structure of the PBI).

The original control scale of the PBI contains 7 items reflective of controlling parental behavior (e.g., I try to control everything my child does), and 6 items reflective of autonomy granting behavior or granting of behavioral freedom (e.g., I give her as much freedom as she wants). All 7 items consistent with controlling maternal behavior loaded on the control factor among White mothers. However, the finding was somewhat less consistent for Hispanic mothers,

as only 4 of the 7 items loaded significantly on the new control factor. A similar pattern emerged for the autonomy granting items. Specifically, 4 of the 6 original items loaded on the new control factor for White mothers, and only 2 of the 6 original items loaded on the new control factor for Hispanic mothers.

In summary, these findings collectively suggest that maternal control and warmth are substantially different constructs for White families when compared to Hispanic families. First, based on the above factor analyses, a *lack of warmth* appears to be a strategy to control child behavior in the Hispanic sample, as items related to a lack of warmth loaded on the control factor. However, items related to a *lack of warmth* loaded on the warmth factor for White mothers, suggesting that maternal warmth and a lack of maternal warmth were on opposite ends of the same continuum of behavior for White mothers but not for Hispanic mothers.

Second, the original control items of the PBI, which include control and autonomy granting, were found to generally load on the same factor in the White sample, suggesting that they are on the opposite end of the same continuum of behavior. However, the original control items less consistently loaded on the control factor for the Hispanic sample, a finding that appeared to be particularly true for the autonomy granting items. This finding suggests that that autonomy granting behaviors and controlling behaviors are not necessarily on opposite ends of the same continuum for Hispanic mothers, whereas these behaviors are the same continuum for White mothers. In other words, autonomy granting appears to be independent of maternal control and does not appear to form a distinct construct in the Hispanic sample.

Hypothesis 4

The fourth hypothesis is that the set of variables predicting anxiety for White mothers will differ from the set of variables predicting anxiety for Hispanic mothers. Separate, simultaneous multiple regression analyses were conducted to examine White and Hispanic mothers on the predictors of child anxiety. For both ethnic groups, the predictor variables were: the DASS-A (a measure of maternal anxiety); the CTQ (a measure of inhibited, shy temperament); the modified subscales of the PBI (which differ based on mothers' ethnicity); and the subscales of the CLOAS (measures of parental behaviors hypothesized to be associated with children anxiety from their parents). Covariates were consistent with the regression analysis from the first hypothesis: level of mother's education**,** number of children living in the home, the extent to which others raise the target child, social desirability, acculturation, and levels of maternal stress. Child anxiety, as measured by the total score on the RCMAS, was the criterion variable (see Table 11).

For White mothers, the overall model was significant, F (15, 167) = 6.80, $p < .001$, $R^2 = .38$. The following variables were significant predictors of child anxiety: DASS-A ($\beta = -.15$, $p < .05$), CTQ ($\beta = -.26$, $p < .001$), PBI-Warmth ($\beta = -.27$, $p < .001$), PBI-Control ($\beta = .15$, $p < .05$), and CLOAS-Modeling ($\beta = -.13$, $p < .05$). These findings indicate that maternal anxiety, child temperament, lower levels of maternal warmth, higher levels of maternal control, and maternal modeling of anxiety are variables that significantly and uniquely predict levels of child anxiety.

The regression analysis was repeated with the Hispanic sample. The regression was identical with the exception that the two PBI scales were based on a different factor structure (see Table 12). The overall model was significant, F (15, 52) = 4.47, $p < .001$, $R^2 = .57$; however, the only significant predictor of child anxiety was the CTQ ($\beta = -.27$, $p < .05$). In contrast to the

findings in the regression for the sample of White mothers, child temperament was the only significant predictor of child anxiety. However, before inferring differences between the two samples regarding the significant predictors of child anxiety, it deserves mentioning that the Hispanic sample was substantially smaller than the White sample.

Young Adult Sample

Reliability Analysis

Cronbach's alphas were conducted separately by ethnicity on each of the measures and subscales to examine the internal consistency (see Table 13). Although most measures and subscales demonstrated adequate internal consistency (i.e., alphas of .70 or greater), in the White sample, low reliability was found for the MCSDS (α = .65) and the BAS-E (α = .64). In the Hispanic sample, low reliability was found for the BAS-E (α = .53). Cronbach's alphas were not conducted for the RRS, as items were not anticipated to be correlated.

Sociodemographic Variable Analysis. A MANOVA was conducted to determine if the White and Hispanic young adults differed significantly on demographic variables and potential covariates. Ethnicity (White vs. Hispanic) and gender of the young adults were the independent variables IVs. Participants' age, class standing, number hours worked per week, birth order, number of siblings, extent to which they were raised by extended family members, mother's education, the Readjustment Rating scale (RRS), Bidimensional Acculturation Scale—European American Orientation (BAS-E), Bidimensional Acculturation Scale—Hispanic Orientation (BAS-H), and the Marlowe-Crowne Social Desirability Scale (MCSDS) served as the dependent

variables (DVs) (see Table 14). Based on a Wilks' Lambda significance test, there was a main effect for ethnicity, F (11, 256) = 11.21, $p < .001$, $\eta^2 = .33$. Univariate tests indicated that the two ethnic groups differed significantly on the BAS-H (White young adults $M = 15.65$ [$SD = 4.50$], Hispanic young adults $M = 28.00$ [$SD = 8.71$], F [1, 266] = 122.69, $p < .001$, $\eta^2 = .32$). However, there was no significant main effect for gender, F (11, 256) = 0.92, *ns*, or an ethnicity x gender interaction, F (11, 256) = 0.89, *ns*. It is noteworthy that although there was considerable variability in the scores on the BAS among Hispanic participants, on average Hispanics scored higher on the European Acculturation subscale ($M = 46.64$, $SD = 1.82$) when compared to the Hispanic Acculturation subscale ($M = 28.44$, $SD = 8.99$). This suggests that the Hispanic sample was significantly acculturated to "mainstream," European-American culture.

White and Hispanic young adults also were compared on categorical demographic data through a series of chi-square analyses. These demographic variables included: their living arrangements (i.e., living or not living with parents), their parental status (have children or no children), marital status, and whether they were raised by their biological mother. These results indicated that the two ethnic groups did not differ significantly on the following: living arrangements, χ^2 (1) = 0.20, parental status, χ^2 (1) = 0.17, marital status, χ^2 (1) = 3.47, and if they were raised by their biological mother, χ^2 (3) = 0.02 (see Table 15). Subsequent regression analyses included BAS-H as a covariate, given its status as the only sociodemographic variable on which the two ethnic groups differed.

Pearson r correlations were conducted to examine the association between demographic variables and the Anxiety subscale of the Depression Stress and Anxiety Scale (DASS-A), the primary dependent variable (Table 16). Of the demographic characteristics in the White sample, anxiety significantly correlated with age, r (332) = .21, $p < .001$, RRS scores, r (320) = .21, $p <$

.001, and class standing, r (333) = .24, $p < .001$. Of the demographic characteristics in the Hispanic sample, anxiety significantly correlated with birth order, r (60) = -.27, $p < .05$, and gender, r (58) = .30, $p < .05$. No other correlations between the DASS-A and demographic characteristics were significant in either sample. Demographic variables significantly associated with child anxiety were entered as covariates in subsequent regression analyses examining the predictors of current levels of anxiety and the analysis comparing retrospective recall of levels of control exerted by their mothers (i.e., hypotheses 1, 3, and 4).

A MANCOVA was conducted to determine if the White and Hispanic young adults differed significantly on the variables that were the focus of this study (see Table 17). Ethnicity (White vs. Hispanic) and gender of the young adults were the IVs, and the DVs were: STAI-P, RSRI, and DASS-A. The BAS-H was entered as a covariate. Based on a Wilks' Lambda significance test, there was a significant main effect for gender, F (1, 389) = 4.14, $p < .05$, η^2 = .04. Univariate tests indicated that males and females differed on all three variables: STAI-P (females' M = 35.62 [SE = 0.89], males' M = 32.57 [SE = 1.35], F [1, 389] = 3.94, $p < .05$, η^2 = .01); DASS-A (females' M = 3.28 [SE = 0.29], males' M = 2.26 [SE = 0.44], F [1, 389] = 4.14, $p < .05$, η^2 = .01); and RSRI (females' M = 68.31 [SE = 1.26], males' M = 61.95 [SE = 1.91], F [1, 389] = 8.53, $p < .05$, η^2 = .02). However, there was no main effect for ethnicity, F (1, 389) = 3.08, *ns*. There was a significant ethnicity x gender interaction, F (1, 389) = 4.51, $p < .05$, η^2 = .03. Specifically, Hispanic males reported lower scores on the STAI-P and DASS-A compared to Hispanic females, White males, and White females; however, these results should be interpreted with caution, as there were only 15 Hispanic male participants. Based on the main effect for gender, gender was considered a covariate in subsequent hypothesis testing.

Analysis of the Child Learning of Anxiety Scale (CLOAS)

The retrospective version of the CLOAS was subjected to an exploratory factor analysis through a principal axis analysis. Based on the scree plot and item analysis of the factors, a three-factor solution was retained (Table 18). Items with factor loadings of .3 or greater on only one factor were retained, and using this criteria, 29 of the 40 items on the scale were included in the final version of this measure. The first factor included 9 items, and these items appear to measure parent modeling of anxiety— maternal modeling of both anxious and non-anxious behaviors (labeled *CLOAS-Modeling*). Cronbach's alpha for this factor were .79 and .77 for the White and Hispanic young adults, respectively. The second factor included 10 items, and these items appear to measure parental reinforcement of anxious behaviors and negative information transfer (labeled *CLOAS- Anxious Parenting*). Cronbach's alpha for this factor were .77 and .71 for White and Hispanic young adults, respectively. The third factor included 10 items, and these items appear to measure reinforcement of non-anxious behaviors and positive information transfer (labeled *CLOAS- Non-Anxious Parenting)*. Cronbach's alphas for this factor were .83 and .91 for the White and Hispanic young adults, respectively. It is noteworthy that the obtained factor structure is similar to the factor structure obtained with this instrument on self-report mother sample.

Hypothesis 1

The first hypothesis was that the variables considered relevant to the development of anxiety (i.e., recall of marital anxiety, child temperament, recall of maternal warmth, recall of maternal control, and recall of maternal behaviors related to child learning of anxiety) would

conjointly and uniquely predict current levels of anxiety. A simultaneous multiple regression was conducted to test this hypothesis (see Table 19). The predictor variables were: the STAI-P (a measure of young adult recall of maternal anxiety); the RSRI (a retrospective instrument designed to measure recall of shy, inhibited temperament); the Warmth and Control subscales of the PBI (a measure of recalled maternal warmth and care); and the three subscales of the CLOAS (measures recall of behaviors hypothesized to be associated with learning anxiety from mothers). Young adult self-report of their current levels of anxiety, as measured by the DASS-A, was the criterion variable. Young adults' gender, age, class standing, birth order, RRS, and the BAS-H were entered as covariates. Results indicated that the overall regression model was significant, F (13, 437) = 7.62, $p < .001$, $R^2 = .19$, and two of the six variables were found to be significant predictors of current levels of anxiety, as measured by the DASS-A-- the STAI-P ($\beta = .15$, $p < .05$) and RSRI ($\beta = .25$, $p < .001$).

Hypotheses 2

The second hypothesis was that recall of three types of learning of anxiety from mothers would significantly predict current levels of young adult anxiety and recall of maternal anxiety. To test the first part of this hypothesis, a multiple regression analysis was conducted, with each of the CLOAS subscales (CLOAS-Modeling, CLOAS- Anxious Parenting, and CLOAS- Non-Anxious Parenting) entered as predictor variables. The DASS-A was the criterion variable. The overall model was significant, F (3, 496) = 5.76, $p < .001$, $R^2 = .03$. The CLOAS- Non-Anxious Parenting was the only significant predictor of current levels of young adult anxiety, $\beta = .17$, $p < .001$.

The regression analysis was repeated with the addition of the interaction terms between each of the CLOAS subscales: CLOAS-Modeling x CLOAS- Non-Anxious Parenting, CLOAS-Modeling x CLOAS- Anxious Parenting, and CLOAS- Non-Anxious Parenting x CLOAS-Anxious Parenting to determine the presence of interaction effects (see Table 20). With the addition of these regression coefficients, the overall model was significant, F (6, 493) = 3.99, $p <$ .001, R^2 = .05, and the significant predictors included the following: CLOAS-Modeling, β = -.71, $p < .05$, and the CLOAS-Modeling x CLOAS- Anxious Parenting interaction, β = .89, $p < .05$. In essence, when the interaction terms were added, the interaction between modeling and anxious parenting significantly predicted child anxiety. This finding suggests that, before the interaction terms are added to the equation, the CLOAS- Anxious Parenting and CLOAS-Modeling were not significant predictors of anxiety. However, the combined effect of these variables significantly predicts current levels of anxiety.

Examination of the association between the CLOAS and maternal anxiety. To test the second part of this hypothesis, the three subscales of the CLOAS were regressed on young adult recall of their mother's anxiety. Recall of maternal anxiety, as measured by the STAI-P, was the criterion variable and the CLOAS subscales served as the predictor variables. The overall model was significant, F (3, 496) = 96.37, $p < .001$, R^2 = .37, and both the CLOAS-Modeling (β = .33, $p < .001$) and CLOAS- Non-Anxious Parenting subscales (β = .50, $p < .001$) were significantly associated with maternal anxiety (see Table 21).

Hypothesis 3

The third hypothesis was that White and Hispanic young adults will differ in their recall of the maternal control, as measured by the PBI-Control subscale. Specifically, Hispanics were predicted to recall higher levels of maternal control. An ANCOVA was conducted to examine potential differences between White and Hispanic young adults on the PBI-Control subscale, after controlling for covariates. Young adult ethnicity (White vs. Hispanic) was the IV and the PBI-Control subscale was the DV; the BAS-E and BAS-H were entered as covariates. There was no significant difference between ethnic groups on reported levels of parental control (Mean for White Participants = 17.70 [*SD* = 0.90], Mean for Hispanic Participants = 17.53 [*SD* = 90], *F* [3, 400] = 0.73).

Hypothesis 4

The fourth hypothesis is that the set of variables predicting anxiety for White young adults will differ from the set of variables predicting anxiety for Hispanic young adults. Separate, simultaneous multiple regression analyses were conducted to compare the White and Hispanic young adults on the predictors of their current levels of anxiety. For both ethnic groups, the predictor variables were: the STAI-P (a measure of participant recall of maternal anxiety); the RSRI (a retrospective measure designed to measure recall of shy, inhibited temperament); the Warmth and Control subscales of the PBI; and the three subscales of the CLOAS (measures recall of maternal behaviors hypothesized to be associated with child anxiety). The following covariates also were entered into the regression equation: gender, age, birth order, and class standing. Further, the BAS-H was entered as a covariate in the Hispanic sample regression.

Current levels of young adult anxiety, as measured by the total score on the DASS-A, was the criterion variable. For the White sample, the overall model was significant, $F (12, 301) = 6.67$, $p < .001$, $R2 = .18$ (see Table 22). The following variables were significant predictors of current levels of anxiety: the RSRI ($\beta = .20$, $p < .001$) and CLOAS-N ($\beta = .13$, $p < .05$). The regression analysis was repeated with the Hispanic sample (see Table 23). The overall model was significant, $F (13, 39) = 2.32$, $p < .05$, $R2 = .25$, and the only significant predictor of current levels of young adult anxiety was the STAI-P ($\beta = .46$, $p < .05$).

Table 1. Cronbach's Aphas for Scales in the Parent Sample by Ethnicity

	Cronbach's Alphas		
Measure	Hispanic	White	Total (all ethnic groups)
CTQ[a]	.78	.82	.79
PBI-Warmth[b]	.80	.79	.79
PBI-Control[c]	.32	.69	.65
RCMAS[d]	.90	.89	.90
BAS-E[e]	.93	.81	.93
BAS-S[f]	.92	.91	.98
DASS-A[g]	.86	.81	.83
MCSDS[h]	.75	.66	.67

Note. [a] = Child Temperament Questionnaire; [b] = Parent Bonding Instrument— Warmth Subscale; [c] = Parent Bonding Instrument— Control Subscale; [d] = Revised Children's Manifest Anxiety Scale; [e] = Bidimensional Acculturation Scale— European Orientation; [f] = Bidimensional Acculturation Scale—Hispanic Orientation; [g] = Depression Anxiety and Stress Scale— Anxiety Subscale; [h] = Marlowe-Crowne Social Desirability Scale.

Table 2. Sociodemographic Variable Means for White and Hispanic Parents

	Means		Standard Deviations	
Variable	Whites	Hispanics	Whites	Hispanics
Age of parent	36.53	35.46	6.96	7.00
Level of education	4.61	4.21	0.89	1.07
Number of children living at home	1.88	1.89	0.92	0.86
Extent to which other family members assist in raising the child	1.89	1.82	0.82	1.02
Age of target child	9.18	9.21	2.07	2.18
RRS[a]	1.96	1.44	1.54	1.80
BAS- E[b]	47.09	41.81	2.50	6.45
BAS- H[c]	13.89	36.35	3.97	8.38
MCSDS[d]	20.21	21.54	3.05	3.03

Note. [a] = Readjustment Rating Scale. [b] = Bidimensional Acculturation Scale—European Orientation. [c] = Bidimensional Acculturation Scale—Hispanic Orientation. [d] = Marlowe-Crowne Social Desirability Scale.

Table 3. Categorical Sociodemographic Variables by Ethnicity in the Parent Sample

Variable/ Category	Hispanics	Whites
Marital Status		
Single- Never Married	12 (14.6%)	25 (12.1%)
Married	54 (65.9%)	152 (73.8%)
Divorced	8 (9.8%)	17 (8.3%)
Separated	8 (9.8%)	12 (5.8%)
Percentage of families of mixed ethnicity	9 (4.4%)	17 (18.9%)
Gender of the target child		
Male	54 (62.1%)	97 (48.0%)
Female	33 (37.9%)	105 (52%)

Table 4. Correlations between RCMAS and Demographic Variables by Ethnicity in the Parent Sample

	Hispanic	White	Difference
Age of Parent	.08	.002	.08
Level of Education	.07	.10	.03
Number of children living at home	-.26*	-.07	.19
Extent to which other family members assist in raising the child	-.17	-.14*	.03
Age of target child	-.15	-.06	.09
Gender of target child	.26*	.12	.14
RRS[a]	-.37**	-.24**	.13
BAS- E[b]	.25*	.10	.15
BAS- H[c]	-.22	-.18	.04

Note. [a] = Readjustment Rating Scale. [b] = Bidimensional Acculturation Scale—European Orientation. [c] = Bidimensional Acculturation Scale—Hispanic Orientation. When comparing scores for White and Hispanic parents, the differences in the magnitude of the correlations between study variables and the RCMAS did not significantly differ at the .05 level (column 3). *** p<.001, ** p< .01, * p< .05.

Table 5. Descriptive Statistics for MANCOVA in the Parent Sample

	Adjusted Means		Unadjusted Means	
Variable	Whites	Hispanics	Whites	Hispanics
CTQ[a]	25.55	24.37	25.55	24.37
PBI-Warmth[b]	15.59	15.85	15.59	15.85
RCMAS[c]	67.73	67.18	67.73	67.16
DASS-A[d]	2.56	2.18	2.56	2.18

Note. [a] = Child Temperament Questionnaire; [b] = Parent Bonding Instrument— Warmth Subscale; [c] = Revised Children's Manifest Anxiety Scale; [d] = Depression Anxiety and Stress Scale—Anxiety Subscale. Covariates included: mothers' education, Readjustment Rating Scale, Marlowe-Crowne Social Desirability Scale, Bidimensional Acculturation Scale—European Orientation, and Bidimensional Acculturation Scale—Hispanic Orientation.

Table 6. Rotated Factor Matrix for the Child Learning of Anxiety Scale- Parent Version (CLOAS-PV)

Item Number	CLOAS-Modeling (Factor 1)	CLOAS- Anxious Parenting (Factor 2)	CLOAS- Non-Anxious Parenting (Factor 3)
1	.63*	.06	-.04
2	.50*	.16	-.005
3	.61*	.06	.06
4	.45*	.04	.11
5	.43*	.17	.01
6	.68*	.07	-.08
7	.43*	.04	-.04
8	.54*	.08	.05
9	.38*	.10	.03
10	.53*	-.04	.11
11	.26	-.16	.33*
12	.12	-.14	.34*
13	.23	-.03	.26
14	.54*	.01	.12
15	.28	.48*	-.12
16	.10	.56*	-.21
17	-.04	.08	.20
18	-.16	.10	.51*
19	-.16	-.002	.59*
20	.04	-.24	.52*
21	.20	.50*	-.08
22	-.03	.36*	-.08
23	.05	.41*	.15
24	.08	.52*	-.04
25	.11	.49*	-.15
26	-.16	-.18	.41*
27	-.02	.53*	-.07
28	.02	.41*	.14
29	.11	-.24	.47*
30	-.04	.46*	-.18
31	.02	-.01	.58*
32	.03	.02	.12
33	.01	.62*	.08
34	.09	-.12	.64*
35	.13	.27	.33*
36	.08	.23	.26
37	.05	.22	-.01
38	-.11	.43*	-.24
39	.04	-.18	.47*
40	.14	-.19	.55*

Note. * Denotes significant factor loadings, based on factors with loadings of .30 or greater on a single factor. Principal Axis extraction method was used with a Quartimax factor rotation.

Table 7. Regression Analysis for Variables Predicting Scores on the RCMAS in the Parent Sample

Variable	*B*	*SE B*	β
DASS-A[a]	-.51	.16	-.18**
CTQ[b]	-.21	.06	-.20***
PBI-Warmth[c]	-.44	.11	-.21***
CLOAS-M[d]	-.22	.08	-.15**
CLOAS-AP[e]	-.02	.09	-.01
CLOAS-NAP[f]	.10	.10	-.05
Covariates			
Mother's education	0.36	.49	.04
Number of children	-1.28	.52	-.12*
Extent to which others raise child	-0.34	.52	-.03
BAS-E[g]	0.10	.13	.05
BAS-H[h]	0.09	.05	.01
RRS[i]	-0.18	.03	-.15
MCSDS[j]	0.53	.17	.18**

Note. [a] = Depression Anxiety and Stress Scale— Anxiety Subscale; [b] = Child Temperament Questionnaire; [c] = Parent Bonding Instrument— Warmth Subscale; [d] = Child Learning of Anxiety Scale- Modeling; [e] = Child Learning of Anxiety Scale— Anxious Parenting Subscale; [f] = Child Learning of Anxiety Scale— Non-Anxious Parenting Subscale; [g] = Bidimensional Acculturation Scale—European Orientation. [h] = Bidimensional Acculturation Scale—Hispanic Orientation. [i] = Readjustment Rating Scale; [j] = Marlowe-Crowne Social Desirability Scale. *** p<.001, ** p< .01, * p< .05.

Table 8. Summary of CLOAS-Parent Version Subscales as Predictors of Child Anxiety

Variable	*B*	*SE B*	β
CLOAS-M[a]	1.66	0.69	1.14*
CLOAS-AP[b]	0.92	0.38	0.56*
CLOAS-NAP[c]	0.99	0.47	0.50*
CLOAS-M x CLOAS-AP[d]	-0.03	0.01	-1.06*
CLOAS-M x CLOAS-NAP[e]	-0.04	0.01	-0.89*

Note. [a] = Child Learning of Anxiety Scale- Modeling; [b] = Child Learning of Anxiety Scale-Anxious Parenting; [c] = Child Learning of Anxiety Scale- Non-Anxious Parenting; [d] = CLOAS-M x CLOAS-AP interaction; [e] = CLOAS-M x CLOAS-NAP interaction. The criterion variable was the Revised Children's Manifest Anxiety Scale (RCMAS).
*** p<.001, ** p< .01, * p< .05.

Table 9. Summary of CLOAS-P Subscales as Associated with Parent Anxiety

Variable	*B*	*SE B*	β
CLOAS-M[a]	0.12	.03	.25***
CLOAS-N[b]	-0.05	.03	-.09
CLOAS-P[c]	0.08	.04	.11*

Note. [a] = Child Learning of Anxiety Scale- Modeling; [b] = Child Learning of Anxiety Scale-Negative; [c] = Child Learning of Anxiety Scale- Positive.
*** p<.001, ** p< .01, * p< .05.

Table 10. Rotated Factor Matrix for the Parent Bonding Instrument for Hispanic Mothers in the Parent Sample

Item Number	PBI- Warmth (Factor 1)	PBI- Control (Factor 2)
1	.47*	.21
2	.30	.52
3	-.19	-.04
4	.23	.65*
5	.79*	.15
6	.59*	.23
7	.40*	.008
8	.02	.39*
9	.16	.37*
10	-.11	.05
11	.82*	.01
12	.45*	.22
13	-.01	-.11
14	.25	.36*
15	-.21	-.18
16	.08	.58*
17	.60*	.29
18	.13	.33*
19	-.04	.56*
20	-.15	.41*
21	.22	-.18
22	.16	.10
23	.35*	-.16
24	.12	.58*
25	-.22	.35*

Note. * Denotes significant factor loadings, based on factors with loadings of .30 or greater on a single factor. Principal Axis extraction method was used with a Quartimax factor rotation.

Table 11. Summary of Regression Analysis for Predictors of the RCMAS in the Sample of White Mothers

Variable	*B*	*SE B*	β
DASS-A[a]	-0.43	0.21	-.15*
CTQ[b]	-0.26	0.06	-.26***
CLOAS-M[c]	-0.20	0.10	-.13*
CLOAS-AP[d]	0.05	0.11	.03
CLOAS-NAP[e]	0.24	0.14	.12
PBI-WW[f]	-0.54	0.15	-.27***
PBI-CW[g]	0.30	0.14	.15*
Covariates			
Mother education level	0.85	0.64	.09
RRS[h]	-0.70	0.39	-.12
BAS-E[i]	0.54	0.32	.12
BAS-S[j]	-0.09	0.17	-.03
MCSDS[k]	0.14	0.20	.05
Number of children living at home	-0.40	0.62	-.04
Gender of target child	1.37	1.10	.08
Extent to which other people assist in raising the child	-0.84	0.70	-.08

Note. [a] = Depression Anxiety and Stress Scale— Anxiety Subscale; [b] = Child Temperament Questionnaire; [c] = Child Learning of Anxiety Scale- Modeling; [d] = Child Learning of Anxiety Scale— Anxious Parenting; [e] = Child Learning of Anxiety Scale— Non-Anxious Parenting; [f] = Parent Bonding Instrument, White Participant Version— Warmth Subscale; [g] = Parent Bonding Instrument, White Participant Version— Control Subscale; [h] = Readjustment Rating Scale. [i] = Bidimensional Acculturation Scale—European Orientation; [j] = Bidimensional Acculturation Scale—Hispanic Orientation; [k] = Marlowe-Crowne Social Desirability Scale.
*** p<.001, ** p< .01, * p< .05.

Table 12. Summary of Regression Analysis for Predictors of the RCMAS in the Sample of Hispanic Mothers

Variable	*B*	*SE B*	B
DASS-A[a]	-0.46	0.28	-0.18
CTQ[b]	-0.33	0.12	-0.27*
CLOAS-M[c]	-0.30	0.16	-0.20
CLOAS-AP[d]	-0.15	0.20	-.086
CLOAS-NAP[e]	0.04	0.22	0.02
PBI-H-Warmth[f]	0.38	0.36	0.12
PBI-H-Control[g]	0.04	0.21	0.02
Covariates			
RRS[h]	-0.83	0.55	-0.16
BAS-H[i]	0.02	0.17	0.01
MCSDS[j]	1.05	0.35	0.32**
Number of children	-4.28	1.23	-0.36**
Gender of target child	3.06	2.03	0.14
Highest level of education	-2.08	1.06	-0.21

Note. [a] = Depression Anxiety and Stress Scale— Anxiety Subscale; [b] = Child Temperament Questionnaire; [c] = Child Learning of Anxiety Scale- Modeling; [d] = Child Learning of Anxiety Scale— Anxious Parenting; [e] = Child Learning of Anxiety Scale— Non-Anxious Parenting; [f] = Parent Bonding Instrument, Hispanic Version— Warmth Subscale; [g] = Parent Bonding Instrument, Hispanic Version— Control Subscale; [h] = Readjustment Rating Scale; [i] = Bidimensional Acculturation Scale—Hispanic Orientation; [j] = Marlowe-Crowne Social Desirability Scale.
*** p<.001, ** p< .01, * p< .05.

Table 13. Cronbach's Alphas by Ethnicity in the Young Adult Sample

Measure	Cronbach's Alphas		
	Hispanic	White	Total (all ethnic groups)
STAI-P[a]	.94	.92	.92
RSRI[b]	.87	.83	.83
PBI-Warmth[c]	.92	.90	.91
PBI-Control[d]	.87	.85	.87
DASS-A[e]	.73	.74	.73
BAS-E[f]	.53	.64	.66
BAS-H[g]	.96	.91	.94
MCSDS[h]	.75	.65	.67

Note. [a] = State-Trait Anxiety Inventory— Parent Version; [b] = Retrospective Self-Report of Inhibition; [c] = Parent Bonding Instrument— Warmth Subscale; [d] = Parent Bonding Instrument— Control Subscale; [e] = Depression Anxiety Stress Scale— Anxiety Subscale; [f] = Bidimensional Acculturation Scale— European Orientation; [g] = Bidimensional Acculturation Scale—Hispanic Orientation; [h] = Marlowe-Crowne Social Desirability Scale.

Table 14. Means for White and Hispanic Young Adults on Sociodemographic Variables

	Means		Standard Deviation	
Variable	Whites	Hispanics	Whites	Hispanics
Age	18.30	18.11	1.18	0.85
Class standing	1.28	1.17	0.69	0.56
Number hours worked per week	7.87	6.08	11.88	11.38
Birth order	1.91	1.53	1.03	0.77
Number of siblings	1.79	1.92	0.08	0.23
Extent to which participants were raised by extended family	2.60	2.36	0.99	1.07
Mother's education	3.56	3.69	0.89	0.89
RRS[a]	1.63	1.81	1.59	1.40
BAS- E[b]	47.05	46.64	1.82	1.82
BAS-H[c]	15.71	28.44	4.54	8.99
MCSDS[d]	10.18	9.83	2.63	2.81

Note. [a] = Readjustment Rating Scale; [b] = Bidimensional Acculturation Scale—European Orientation; [c] = Bidimensional Acculturation Scale—Hispanic Orientation; [d]= Marlowe-Crowne Social Desirability Scale.
*** p<.001, ** p< .01, * p< .05.

Table 15. Categorical Variables by Ethnicity in the Young Adult Sample

Variable/ Category	Hispanics	Whites	χ^2 *(df= 1)*
Percent living with parents	15.0	12.9	0.20
Percent with children	2.9	2.1	0.17
Percent married	3.0	0.6	3.47
Percent whose mother was primary caregiver	92.0	92.5	0.02

Table 16. Correlations between DASS-A and Demographic Variables by Ethnicity in the Young Adult Sample

Variable	White	Hispanic	Difference
Age	.21***	-.21	.42**
Class standing	.24***	-.12	.35**
Hours worked per week	.07	-.20	.27
Birth order	.02	-.29*	.31
Extent to which others raised participant	.06	.17	.11
Mother's level of education	-.05	-.18	.13
RRS[a]	.21***	.19	.02
BAS- E[b]	-.10	.07	.17
BAS- H[c]	.04	.17	.13
Live with parents	.02	.09	.07
Children	.09	.03	.06
MCSDS	.07	.02	.05

Note. [a] = Readjustment Rating Scale; [b] = Bidimensional Acculturation Scale—European Orientation; [c] = Bidimensional Acculturation Scale—Hispanic Orientation. When comparing scores for White and Hispanic parents, White and Hispanic parents differed in the magnitude of the association between anxiety, as measured by the DASS-A, and the following variables: age and class standing. The differences in the magnitude of all other correlations between study variables and anxiety did not significantly differ at the .05 level (column 3).
*** p<.001, ** p< .01, * p< .05.

Table 17. Comparisons between White and Hispanic Young Adults on Study Variables

	Adjusted Means		Unadjusted Means	
Variable	Whites	Hispanics	Whites	Hispanics
DASS-A[a]				
Males	3.32	1.19	3.23	1.60
Females	3.28	3.28	3.21	3.76
STAI-P[b]				
Males	35.18	29.96	35.03	30.60
Females	34.34	36.69	34.43	34.44
RSRI[c]				
Males	62.66	61.52	62.03	64.00
Females	67.76	68.85	67.25	72.09

Note. [a] = Depression Anxiety Stress Scale— Anxiety Subscale; [b] = State-Trait Anxiety Inventory— Parent Version; [c] = Retrospective Self-Report of Inhibition.

Table 18. Rotated Factor Matrix for the Child Learning of Anxiety Scale- Retrospective Version (CLOAS-RV)

Item Number	CLOAS-Modeling (Factor 1)	CLOAS- Anxious Parenting (Factor 2)	CLOAS- Non-Anxious Parenting (Factor 3)
1	-.001	.12	.62*
2	-.16	.16	.65*
3	-.14	.14	.52*
4	-.11	.09	.41*
5	-.13	.32	.37
6	-.09	.24	.67*
7	.25	-.01	.48*
8	-.14	.17	.27
9	.25	-.01	.48*
10	.09	.005	.51*
11	.58*	-.17	.19
12	.57*	-.12	.14
13	.47*	-.01	.13
14	.04	.12	.41*
15	-.08	.47*	.11
16	-.23	.53*	.09
17	.51*	.02	-.11
18	.73*	-.05	-.07
19	.80*	-.04	-.09
20	.74*	-.17	-.01
21	-.23	.48*	.11
22	-.10	.19	-.005
23	.25	.24	.05
24	-.03	.55*	.08
25	-.26	.57*	.08
26	.61*	-.25	-.02
27	-.02	.37*	.08
28	.07	.35*	.06
29	.42	-.37	-.02
30	-.44	.49	.02
31	.67*	-.17	-.11
32	.10	.02	-.05
33	-.21	.54*	.07
34	.76*	-.17	-.09
35	.34	.30	.08
36	.25	.33*	.05
37	-.10	.46*	.04
38	-.47	.56	.005
39	.57	-.32	-.02
40	.54	-.40	-.01

Note. * Denotes significant factor loadings, based on factors with loadings of .30 or greater on a single factor. Principal Axis extraction method was used with a Quartimax factor rotation.

Table 19. Summary of Regression Analysis for Variables Predicting Scores on the DASS-A in the Young Adult Sample

Variable	*B*	*SE B*	β
STAI-P[a]	0.05	0.02	.15*
RSRI[b]	0.06	0.01	.25***
PBI-Warmth[c]	-0.02	0.03	-.04
PBI-Control[d]	-0.01	0.02	-.02
CLOAS-M[e]	-0.01	0.03	-.02
CLOAS-AP[f]	0.06	0.03	.09
CLOAS-NAP[g]	0.01	0.03	.01
Covariates			
Age	0.10	0.09	.07
Gender	-0.07	0.29	-.01
Class standing	0.35	0.20	.11
Birth order	-0.14	0.13	-.05
BAS-H[h]	-0.03	0.02	-.06
RRS[i]	0.35	0.09	.18***

Note. [a] = State-Trait Anxiety Inventory— Parent Version; [b] = Retrospective Self-Report of Inhibition; [c] = Parent Bonding Instrument— Warmth Subscale; [d] = Parent Bonding Instrument— Control Subscale; [e] = Child Learning of Anxiety Scale- Modeling Subscale; [f] = Child Learning of Anxiety Scale- Anxious Parenting Subscale; [g] = Child Learning of Anxiety Scale- Non-Anxious Parenting Subscale; [h] = Bidimensional Acculturation Scale—Hispanic Orientation; [i] = Readjustment Rating Scale.

Table 20. Summary of CLOAS-RV Scores as Predictors of Anxiety in the Young Adult Sample

Variable	*B*	*SE B*	β
CLOAS-M[a]	-.41	.19	-.71*
CLOAS-AP[b]	-.27	.15	-.44
CLOAS-NAP[c]	-.04	.12	-.08
CLOAS-M x CLOAS-AP[d]	.004	.004	.26
CLOAS-M x CLOAS-NAP[e]	.01	.004	.89*

Note. [a] = Child Learning of Anxiety Scale- Modeling; [b] = Child Learning of Anxiety Scale-Anxious Parenting; [c] = Child Learning of Anxiety Scale- Non-Anxious Parenting; [d] = CLOAS-M x CLOAS-AP interaction; [e] = CLOAS-M x CLOAS-NAP interaction. The criterion variable was the Depression Anxiety and Stress Scale- Anxiety Subscale (DASS-A).
*** p<.001, ** p< .01, * p< .05.

Table 21. Summary of CLOAS-RV Scores as Predictors of Scores on the DASS-A

Variable	*B*	*SE B*	β
CLOAS-M[a]	0.60	.07	.33***
CLOAS-AP[b]	-0.12	.07	-.06
CLOAS-NAP[c]	0.78	.06	.50***

Note. [a] = Child Learning of Anxiety Scale- Modeling; [b] = Child Learning of Anxiety Scale- Anxious Parenting; [c] = Child Learning of Anxiety Scale- Non-Anxious Parenting. The criterion variable was the Depression Anxiety and Stress Scale- Anxiety Subscale (DASS-A).
*** p<.001, ** p< .01, * p< .05.

Table 22. Summary of Predictors of Scores on the DASS-A in the Sample of White Young Adults

Variable	*B*	*SE B*	β
STAI-P[a]	0.05	.025	.13
RSRI[b]	0.05	.013	.20***
PBI-Warmth[c]	-0.02	.036	-.04
PBI-Control[d]	-0.04	.027	-.09
CLOAS-M[e]	-0.01	.035	-.02
CLOAS-AP[f]	0.08	.036	.13*
CLOAS-NAP[g]	0.03	.033	.07
Covariates			
Age	0.03	.132	.02
Gender	-0.12	.340	-.02
Class standing	0.59	.264	.19*
Birth order	0.09	.167	.03
RRS[h]	0.33	.103	.17**

Note. [a] = State-Trait Anxiety Inventory— Parent Version; [b] = Retrospective Self-Report of Inhibition; [c] = Parent Bonding Instrument— Warmth Subscale; [d] = Parent Bonding Instrument— Control Subscale; [e] = Child Learning of Anxiety Scale- Modeling Subscale; [f] = Child Learning of Anxiety Scale- Negative Subscale; [g] = Child Learning of Anxiety Scale- Positive Scale; [h] = Readjustment Rating Scale.
*** p<.001, ** p< .01, * p< .05.

Table 23. Summary of Regression Analysis for Variables Predicting Scores on the DASS-A in the Sample of Hispanic Young Adults

Variable	*B*	*SE B*	β
STAI-P[a]	0.13	0.05	0.46*
RSRI[b]	0.06	0.03	0.28
PBI-Warmth[c]	-0.04	0.11	-0.08
PBI-Control[d]	0.09	0.07	0.22
CLOAS-M[e]	0.01	0.08	0.03
CLOAS-AP[f]	-0.18	0.11	-0.25
CLOAS-NAP[g]	0.006	0.07	0.01
Covariates			
Age	-0.43	0.60	-0.16
Gender	0.65	1.03	0.09
Class standing	-0.27	0.75	-0.09
Birth order	-0.83	0.50	-0.24
BAS-H[h]	0.07	0.05	0.22
RRS[i]	-0.04	0.33	-0.02

Note. [a] = State-Trait Anxiety Inventory— Parent Version; [b] = Retrospective Self-Report of Inhibition; [c] = Parent Bonding Instrument— Warmth Subscale; [d] = Parent Bonding Instrument— Control Subscale; [e] = Child Learning of Anxiety Scale- Modeling Subscale; [f] = Child Learning of Anxiety Scale- Negative Subscale; [g] = Child Learning of Anxiety Scale- Positive Scale; [h] = Bidimensional Acculturation Scale—Hispanic Orientation; [i] = Readjustment Rating Scale. *** p<.001, ** p< .01, * p< .05.

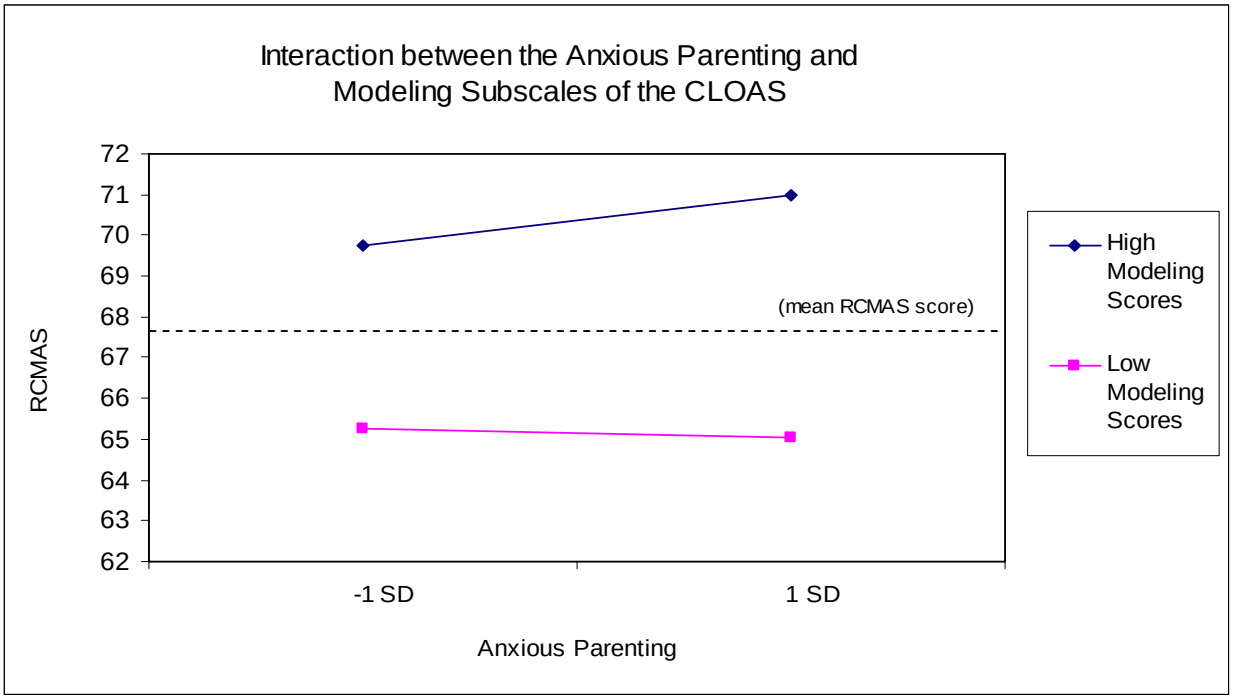

Figure 1. Interaction between the Anxious Parenting and Modeling Subscales of the CLOAS as predictors of scores on the RCMAS.

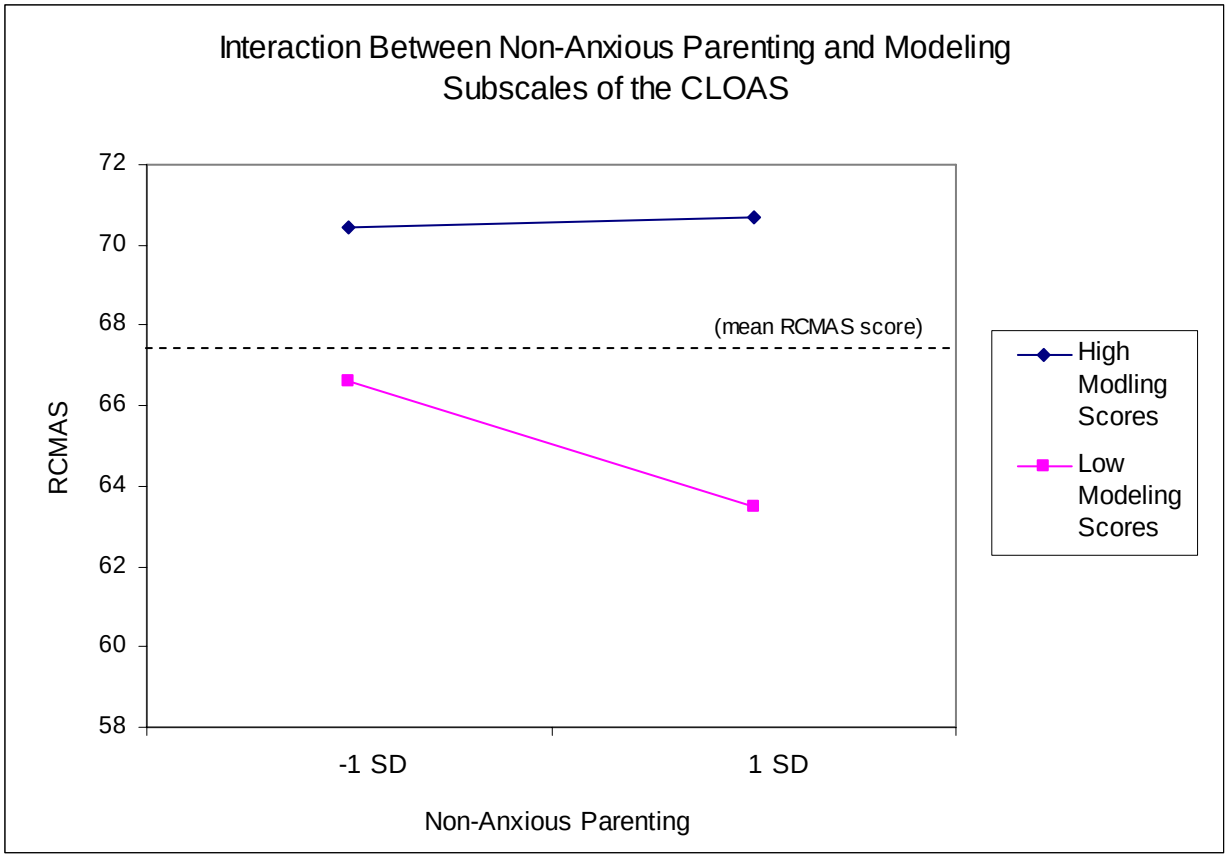

Figure 2. Interaction between the Non-Anxious Parenting and Modeling Subscales of the CLOAS as predictors of scores on the RCMAS.

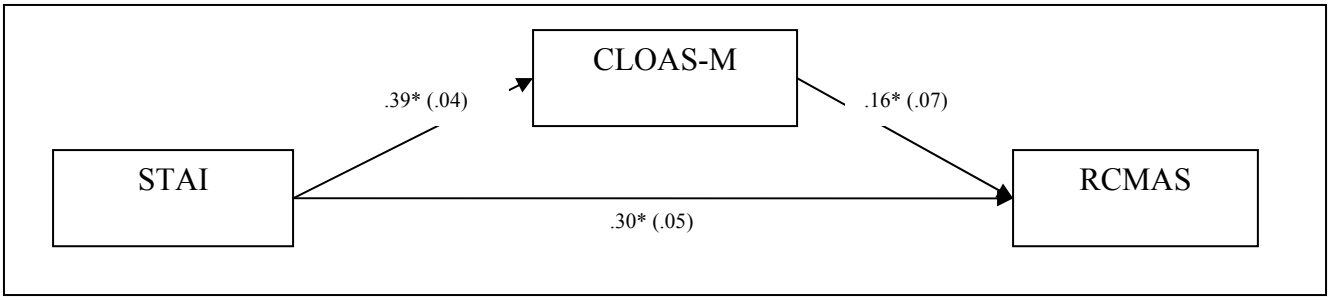

Figure 3. Parental modeling as a mediator between parent and child anxiety.

CHAPTER FOUR: CONCLUSION

There were several goals to this study. The first goal was to examine the role of potential predictors of child anxiety. A related purpose was to more specifically compare and contrast the predictors of child anxiety for Whites and Hispanics, including comparing levels of parental control between White and Hispanic parents. A final goal was to examine the psychometric properties of the Child Learning of Anxiety Scale (CLOAS), a measure developed for the purpose of this study to assess potential mechanisms of learning of anxiety from parents. The association between the CLOAS and both parent and child anxiety also was examined with the hypothesis that this measure would be associated with current levels of anxiety. Each of these hypotheses were examined in two independent samples. One sample consisted of mothers of pre-adolescent children and the other sample consisted of young adults in college.

Hypothesis One

The first hypothesis was that the variables considered to be relevant to the development of anxiety would significantly and conjointly predict anxiety. It was expected that successful prediction of anxiety would occur for both children (based on their mothers' concurrent reports) and the young adults (based on their retrospective recall).

In the mother sample, a regression analysis was conducted with the following variables entered as predictors of child anxiety: maternal anxiety, behavioral inhibition, maternal warmth, and behaviors related to child learning of anxiety (i.e., the Modeling, Anxious-Parenting, and Non-Anxious Parenting subscales of the CLOAS). After controlling for relevant covariates,

results indicated that the overall regression model was significant, and four of the six predictor variables were found to be significant predictors of child anxiety: maternal anxiety, maternal warmth, child behavioral inhibition, and maternal modeling of anxiety.

Although maternal anxiety, maternal warmth, and inhibited child temperament have been well-established as predictors of child anxiety, these results demonstrate that each of these variables are significant and *unique* predictors of child anxiety. These results also provide direction for the development of an empirically based developmental model explaining the development of child anxiety. Specifically, it appears that each of these variables are risk factors for the development of anxiety. These variables include both maternal characteristics, maternal behaviors (i.e., modeling and a lack of warmth) and child characteristics (i.e., inhibited temperament), and although each of these variables play a unique role in the development of anxiety, it is also feasible that these variables may interact with one another to exacerbate the development of child anxiety. The finding that the Modeling subscale of the CLOAS predicted a significant amount of variance in child anxiety scores beyond other more commonly examined predictor variables is also noteworthy. In particular, this finding suggests that social learning may play a role in the transmission of anxiety from mother to child. Despite the parsimony of the hypothesis that social learning may play a role in the development of child anxiety, modeling has received considerably less attention as a predictor of child anxiety, when compared to the other significant predictors of anxiety in the current model.

The first hypothesis also was examined in the young adult sample, based on their retrospective recall of their own behavior and that of their mothers. However, only two of the six variables were found to significantly predict current levels of anxiety-- maternal anxiety and their own behavioral inhibition. Interestingly, in contrast to the mother sample, recalled

parenting behaviors (i.e., maternal warmth, maternal modeling, anxious parenting, and non-anxious parenting) were not found to predict anxiety. Interpreted at face value, this finding suggests that parenting behaviors, which can be considered as environmental variables, do not play a significant role in the development of anxiety.

There are a number of possible interpretations for the differences in findings between the mothers and the young adults. First, it is possible that the findings reflect differences between characteristics of each of the samples. Specifically, the young adult sample was relatively homogenous, as they were college students of comparable ages. In contrast, the sample of the mothers from the community exhibited greater heterogeneity in terms of age and level of education. Further, it is speculated that the discrepant findings reflect methodological differences, as the young adults were asked to provide a retrospective recall of their behavior and that of their mother, whereas the mothers from the community were asked provide a concurrent report of their behaviors and the behaviors of their child. Specifically, for the young adults, the retrospective questions may have activated a distinct internal and global schema about their own behaviors and the behaviors of their parents. In other words, assumptions and beliefs about their own behavior as children and the behavior of their parents, rather than actual behavior, may have influenced responses. For example, young adults who currently experience relatively low levels of anxiety may assume that they were not anxious as a child and that their parents did not engage in anxious parenting. Their responses may have reflected these assumptions. This may explain why recall of temperament and recall of maternal behavior, which are both global measures of behavior, were the only significant predictors of current anxiety in the retrospective samples. Young adult schemas may not have been accurate enough to identify specific parent behaviors (e.g., modeling) that may be related to their current levels of anxiety. Finally, the heterogeneity

within the young adult sample may also be associated with the less robust findings in the young adult sample. In particular, all of the young adults who were recruited were college students. Young adults with high and stable levels of anxiety may often not be functioning at a level in which they are likely to attend college. As a result, those with high levels of anxiety may not have been included in the sample, thus restricting the range pathology in the sample.

Hypothesis Two

It was hypothesized that three types of learning (vicarious, instructional, and reinforcement of avoidant behaviors) would significantly predict anxiety both in children (based on maternal self-report) and young adults (based on their retrospective report of their mothers' behavior). To test this hypothesis, the CLOAS was developed for the purpose of this study as a measure of each type of learning. Before the second hypothesis could be tested, the psychometric properties of the CLOAS had to be determined, as this is an experimental measure with no prior psychometric data. Factor analysis of the maternal self-report version of the CLOAS yielded a three factor solution, and each factor demonstrated adequate internal consistency regardless of maternal ethnicity. As expected, maternal modeling of anxiety formed a distinct factor (i.e., Modeling). This factor included parental modeling of anxious behaviors (e.g., my child knows about the things that I fear) and modeling of non-anxious behaviors (e.g., I am rarely in an anxious/nervous state when around my child). However, contrary to expectations, information transfer items and reinforcement of anxiety items did not form separate constructs. Rather, information transfer of anxious information (e.g., I frequently tell my child about ways to avoid danger) and reinforcement of anxious behaviors (e.g., I help my child find ways to avoid scary

situations) loaded on the same factor (i.e., Anxious Parenting). In contrast, information transfer of non-anxious information (e.g., I tell my child, that if something makes them nervous, they should face the challenge) and reinforcement of non-anxious behaviors (e.g., my child receives praise for facing his/her fears) formed an additional factor (Non-Anxious Parenting). It is noteworthy that each subscale yielded adequate internal consistency in both the White and Hispanic mother samples.

The obtained factor structure suggests that maternal management of a child's behaviors are categorized not by the mechanism (e.g., information transfer versus reinforcement), but by the function of the mother's behavior. Specifically, maternal management of their child's behavior includes: (1) Anxious-Parenting, a factor measuring the degree to which parents communicate and reinforce anxious and avoidant behaviors in their child; and (2) Non-Anxious-Parenting, a factor measuring the degree to which parents communicate and reinforce non-anxious behaviors. The first factor appears to measure parental behaviors that are likely to increase the risk of development of anxiety in their children, and the second factor appears to measure parental behaviors that are likely to reduce anxiety in their children (a potential protective factor). The fact that these groups of behaviors formed two distinct factors also suggests that behaviors that likely increase anxiety and behaviors that likely decrease anxiety are not on the opposite ends of the same continuum, as they do not load on the same factor. In other words, mothers who exhibit high levels of anxious parenting may, but do not necessarily, engage in low levels of non-anxious parenting, and vice versa.

The obtained factors were utilized to test the second hypothesis in the mother sample. Interestingly, when examined in a regression equation, with each factor of the CLOAS entered as a potential predictor of child anxiety, only modeling was a significant predictor of child anxiety.

However, the addition of interaction terms indicated that the interaction between CLOAS-Modeling and CLOAS-Anxious Parenting and the interaction between CLOAS-Modeling and CLOAS-Non-Anxious Parenting were significant predictors of child anxiety. These findings suggest that modeling is the only significant and independent predictor of child anxiety, and modeling interacts with other parenting behaviors to predict anxiety.

Although non-anxious parenting and anxious parenting factors of the CLOAS do not independently predict levels of child anxiety in the mother sample, the significant interaction terms indicate that the association between these scales and child anxiety is dependent on the levels of maternal modeling. Specifically, when paired with lower levels of modeling, anxious parenting does not appear to predict child anxiety; however, anxious parenting appears to predict child anxiety at higher levels of modeling. In other words, the combination of high levels of modeling and anxious parenting appears to place children at particularly high risk for anxiety. A somewhat inverse pattern was found for the non-anxious parenting factor. At higher levels of modeling of anxiety, non-anxious parenting was not associated with child anxiety; however, at lower levels of modeling, non-anxious parenting predicted particularly low levels of child anxiety.

Based on the above findings, maternal modeling of anxious and avoidant behaviors appears to be the primary or central learning mechanism (factor) associated with child anxiety. This is particularly relevant, as modeling of anxious behaviors differs from the other two factors in a number of significant ways. Modeling consists of the degree to which mothers appear anxious in a variety of situations in the presence of their children. However, modeling does not specifically involve behavior directed towards the child, and parents who model anxiety often are not explicitly attempting to manage their child's behavior. The other factors (i.e., reinforcement

and information transfer) are related in that they include maternal attempts to manage the child's behavior. As a result, observation of a mother (not maternal management of child's behavior) appears to be the factor most directly and robustly associated with the development of child anxiety.

Another distinction between modeling and the other two factors is that maternal modeling of anxious behaviors appears to be highly related to maternal anxiety. Although maternal anxiety may not be a necessary condition for modeling to occur, as modeling only requires the impression that the mother is anxious, it is unlikely that modeling of anxiety will occur in the absence of maternal anxiety. In other words, anxious mothers are more likely to model anxiety, whereas non-anxious mothers are less likely to model anxiety. Not only was an association found between maternal anxiety and modeling, modeling was found to mediate the association between mother and child anxiety (see Figure 3). An interpretation of this finding is that maternal modeling appears to be one of a number of environmental factors explaining the transmission of anxiety from mother to child. Specifically, it appears that anxious mothers tend to model anxious behaviors, and mothers who tend to model high levels of anxiety may exacerbate the development of anxiety in their children.

This is the first study to provide empirical support for anxious maternal modeling as a mediator between mother and child anxiety, and the results highlight the importance of the modification of parental modeling of anxious behaviors as a strategy to prevent and treat anxiety disorders. As discussed above, in contrast to modeling, anxious parenting (i.e., reinforcement of anxious behaviors and negative information transfer) and non-anxious parenting (i.e., reinforcement of non-anxious behaviors and positive information transfer) include parental attempts to manage and modify their child's behavior. These behaviors are often deliberate and

repetitive attempts to protect the child from perceived danger or to minimize the child's distress, and these behaviors appear to predict child anxiety only when coupled with specific levels of maternal modeling. Overall, these results indicate that anxious parenting (reinforcement and information transfer) are secondary to modeling.

The retrospective version of the CLOAS, which is also an experimental measure developed for the purpose of this study, was administered to the young adult sample. This measure yielded a factor structure similar to the structure of the parent version of the CLOAS. Specifically, a three factor solution was retained with the following subscales: Modeling, Anxious Parenting, and Non-Anxious Parenting. Further, each subscale yielded adequate internal consistency in both the White and Hispanic young adult samples. However, unlike the results obtained from the mother sample, Non-Anxious Parenting, rather than Modeling, was the only significant predictor of current levels of anxiety. Lower levels of recalled non-anxious parenting were related to lower levels of anxiety in young adults. Therefore, non-anxious parenting may be a protective factor that minimizes the occurrence of anxiety.

When the regression analysis was repeated with the addition of the interaction terms between each of the CLOAS subscales to determine the presence of interaction effects, the only interaction that significantly predicted current levels of anxiety was the interaction between Modeling and Anxious Parenting. Stated differently, before the interaction terms were added to the equation, Modeling and Anxious Parenting were not significant predictors of current levels of anxiety, indicating that these variables alone do not predict current levels of anxiety. However, the combined effect of these variables significantly predicted current levels of anxiety. Overall, the association between anxiety and the CLOAS appeared to be slightly less robust in the retrospective sample. These disparate findings may be a function of methodological differences

(i.e., retrospective report versus parent-report). It is also noteworthy that both versions of the CLOAS are experimental and were developed for the purpose of this study. As a result, additional research is needed to confirm the factor structure and related psychometric properties of the CLOAS.

Hypothesis Three

Another goal of this study was to examine and compare the levels of maternal control in White versus Hispanic families. Specifically, the third hypothesis was that Whites and Hispanics would differ significantly on levels of maternal control, operationalized by the control subscale of the PBI. Because of inadequate reliability of the control subscale of the PBI in the mother sample, direct comparisons between levels of control this sample was not possible. As a result, a series of factor analyses were conducted to ascertain a psychometrically sound factor structure for both the White and Hispanic mother samples.

Based on these factor analyses, the factor structure for the PBI in the White mother sample was found to be similar to original factor structure of the PBI, including a warmth and control factor, with similar item loadings on each factor (Parker, 1983). In the Hispanic mother sample, a two factor solution also was obtained and included a warmth and a control factor. However, in contrast to the item loadings for the White mother sample, item loadings on the Hispanic mother sample differed dramatically when compared to the original factor structure of the PBI.

The differences between the original and current factor structure obtained with the Hispanic data may be understood by describing the nature of the items within each factor of the original, unmodified PBI. Specifically, each factor of the PBI has items that are scored in

opposite directions (i.e., some items are reverse-scored). In the case of the warmth scale, six items are consistent with warm, friendly maternal behavior (e.g., speak to my child in a warm or friendly voice), and six items are consistent with a "lack of warmth" on the part of the mother or "cold" maternal behavior (e.g., seem emotionally cold to my child). Interestingly, similar to the original factor of the PBI, all six items consistent with warm and friendly behavior loaded on the new versions of the warmth factor for both the White and Hispanic mother samples. However, all six items of the items suggesting a "lack of warmth" loaded significantly on the *warmth* factor in the White mother sample, yet for the Hispanic mother sample, they loaded on the *control* factor.

Regarding parental control, the original factor structure of the PBI contains 7 items reflective of controlling parental behavior (e.g., I try to control everything my child does), and 6 items reflective of autonomy granting behavior or granting of behavioral freedom (e.g., I give her as much freedom as she wants). For Hispanic mothers, only 4 of the 7 items consistent with controlling parental behavior loaded significantly on the new control factor; however, the factor structure in the White mother sample was consistent with the original factor structure of the PBI, as all 7 items consistent with controlling maternal behavior loaded on the control factor. A similar pattern emerged for the autonomy granting items. Only 2 of the 6 original items loaded on the new control factor for Hispanic mothers; however, a majority of the autonomy granting items loaded on the new control factor for White mothers.

In summary, one interpretation of the differences in factor of the PBI in White versus Hispanic families is that maternal control and warmth are substantially different constructs for White families when compared to Hispanic families. Similar to the original factor structure of the PBI, items related to a lack of warmth appear to load on the warmth factor for White

mothers, suggesting that parental warmth and a lack of parental warmth are on opposite ends of the same continuum of behavior for White mothers. By contrast, for Hispanic mothers, a lack of warmth appears to be a strategy to control child behavior, as items related to a lack of warmth loaded on the control factor. Further, the original control items of the PBI, which include both control and autonomy granting, were found to load on the same factor in the White mother sample, suggesting that they are on the opposite end of the same continuum of behavior. However, control and autonomy granting items were less consistent in their loading on the control factor for the Hispanic mother sample. This finding was particularly true for the autonomy granting items, suggesting that for Hispanic mothers, autonomy granting behaviors and controlling behaviors are not on opposite ends of the same continuum. In other words, autonomy granting may be a separate, independent form of parenting than the construct of maternal control among Hispanics. Similar to the concept of autonomy granting, previous research has found differences between White and Hispanic mothers regarding their emphasis on particular types of independence for their children (Schulze, Harwood, Schoelerich, & Leyndecker, 2002). Specifically, Hispanic mothers were found to emphasize instrumental independence (i.e., self-reliance) in order to ensure that their children meet social expectations. In order words, Hispanic mother's may focus on independence in their children as a strategy to help their children conform to collectivistic goals. In contrast, White mothers tended to place a greater focus on emotional independence. These different perspectives may provide at least a partial explanation for differences in paternal response style to the PBI in the current study.

Despite the possibility that differences in the factor structure of the PBI for White and Hispanic mothers may reflect actual differences in parental behaviors, an alternative explanation is that the different response pattern in the Hispanic sample may be explained by response bias

related to language. In particular, all questionnaires were administered in English. Hispanic mothers in the sample, in which English was likely acquired as a second language, may interpret the items in a different manner when compared to White mothers. Hispanic mothers may respond differently to nuances of the English language, reflective of items on the PBI. As result, different response patterns for Hispanics versus Whites may reflect differences in item interpretation rather than actual differences in parental behavior.

The PBI is a measure commonly utilized to examine parenting behavior. Although a number of studies have compared levels of parental control in White versus Hispanic parents (e.g., Barker et al., 1997; Bulcroft et al., 1996; Dornbusch et al., 1998; Freeman & Newland, 2002; Fuligni, 1998; Gomez-Beneyto, Pedros, Tomas, Aguilar, & Leal, 1993; Harwood et al., 2002; Varela et al., 2004; Vega, 1990), few studies have utilized the PBI to make this comparison. Further, this is among the first studies to examine the psychometric properties of the PBI within a sample of Hispanic mothers. One study did examine the psychometric properties of a Spanish version of the PBI in Spanish speaking mothers from Spain and found that the factor structure and item loadings were similar to the original version of the PBI. However, the properties of that version of the PBI have not been examined in a Hispanic, Non-European population (Gomez-Beneyto et al. 1993). Further, although a number of cross-cultural comparisons have been made regarding *levels* of parental control, the findings of the current study emphasize the importance of examining *definition* or *structure* of the construct of control and control strategies used across cultures.

In the young adult sample, comparisons of Hispanic and Whites in recall of parental control yielded a much different picture. The warmth and control subscales of the PBI were found to be reliable in both samples. Specifically, examination of the internal consistency of the

subscales of the PBI indicated that both White and Hispanic young adults endorsed a pattern consistent with the original factor structure of the PBI. Because the PBI was reliable in the White and Hispanic samples, direct comparisons between recalled levels of maternal control were possible. Interestingly, there was no significant difference between White and Hispanic young adults in recalled levels of parental control.

The finding that White and Hispanic young adults did not differ in recalled levels of maternal control adds to a mixed body of literature regarding ethnic differences in levels of parental control. Although a number of studies have indicated that Hispanic families tend to exert higher levels of control over their children (Bulcroft, Carmody, & Bulcroft, 1996; Dornbusch et al.; Fuligni, 1998; Harwood et al.; Varela et al.; Vega, 1990), other research has found similar levels of control in both ethnic groups (Barker, Melgroza, Roll, Quinlan, & Blatt, 1997; Freeman & Newland, 2002). These differences are likely an artifact of methodological differences, including differences in the operationalization of control and sampling differences. However, despite mixed results, continued research in this area is important, as both survey-based and observational studies have found parental control to be a variable associated with child anxiety (Wood, McLeod, Sigman, Hwang, & Chu, 2003).

Due to the retrospective nature of this study, it is also possible that the findings are a product of biased recall and the lower levels of control may simply reflect lower levels of pathology in both samples. Also, the heterogeneity of the young adult sample (all college students) may have contributed to the absences of ethnic differences in retrospective recall of maternal control.

Hypothesis Four

The fourth hypothesis was that the set of variables predicting anxiety for Whites would differ from the set of variables predicting anxiety for Hispanics. This hypothesis was made based on research suggesting that parenting patterns among Hispanic families may differ from those of White families (Harwood et al. 2002; Dornbusch et al. 1987; Varela et al., 2004). Separate regression analyses were conducted to examine and compare the significant predictors of child anxiety among White and Hispanic mothers (i.e., maternal anxiety, child temperament, maternal warmth, maternal control, and maternal behaviors measured by the CLOAS). For White mothers, maternal anxiety, child temperament, lower levels of maternal warmth, higher levels of maternal control, and maternal modeling of anxiety were variables found to significantly and uniquely predict levels of child anxiety. In contrast to the White mother sample, child temperament was the only significant predictor of child anxiety in the Hispanic mother sample.

Although a focus on statistical significance suggests different patterns of predictor variables for Whites versus Hispanics, an examination of the beta weights for each regression equation indicated that the general pattern of the beta weights, as assessed by both direction and value, were similar for both groups. In other words, the predictors of anxiety in both groups appear to be similar. As a result, differences in statistical significance may be a function of lower statistical power in the Hispanic sample, resulting from a smaller sample size; there may have been higher probability of type II errors in the Hispanic sample. Larger samples sizes are needed to elucidate the similarities and differences in the patterns of predictors of child anxiety in White and Hispanic samples.

Although the beta weights were similar in both samples, it is noteworthy that parenting behaviors were found to be significantly associated with child anxiety only among White mothers. If taken at face value, these findings suggest that environmental factors, including maternal behaviors, may not play a role in the development of anxiety in Hispanic children compared to White children. However, such a situation seems counterintuitive and warrants closer scrutiny.

It is feasible that cultural norms, including differences in family environment and structure, may explain the cultural differences in the impact of maternal behaviors on the development of child anxiety. In particular, it is possible that many Hispanic children may have more contact with adults other than their parents (e.g., extended family members, god parents, etc.) when compared to White children (Falicov, 1998). As a result, Hispanic children may have a greater number of adult models, and this increased contact with other adults may minimize the impact of maternal modeling of anxiety. More specifically, Hispanic children with mothers who engage in the modeling of anxious behaviors may have a number of other adults in their lives who model non-anxious behaviors, and the other adult models may buffer the impact of maternal modeling of anxiety. In a related vein, Hispanic families tend to be larger than White families (U.S. Census Bureau, 2002). As a result, mothers may have less individual contact with each child, and less contact with each child may lead to fewer opportunities to model anxiety for the child or may decrease the impact of the modeling.

It is also noteworthy that child temperament was the only significant predictor of child anxiety across the White and Hispanic samples. This finding is consistent with previous research which has indicated that behaviorally inhibited temperament is a particularly robust predictor of child anxiety (Rapee, 2002). Temperament appears to be influenced by genetics, and may be a

pathway explaining the transmission of anxiety from parent to child (Donovan & Spence, 2000). Further, the finding that temperament was found to be a consistent predictor of child anxiety across the two ethnic groups highlights the importance of identifying temperament as an early risk factor for child anxiety. It is noteworthy that direct ethnic comparisons were compromised because maternal warmth and control were operationalized differently in each sample. Specifically, the revised factor structures of the PBI for each sample, which are described in hypothesis three, were utilized in the analyses.

Separate regression analyses were conducted to compare the White and Hispanic young adults on the predictors of anxiety. For both ethnic groups, the predictor variables included measures of retrospective perceptions maternal anxiety, shy/inhibited temperament, maternal warmth and control, and the three subscales of the CLOAS (i.e., Modeling, Anxious Parenting and Non-Anxious Parenting). For Whites, retrospective recall of behavioral inhibition and the Non-Anxious Parenting subscale of the CLOAS predicted current levels of anxiety. The regression analysis was repeated with Hispanics and the only significant predictor of their current anxiety was their recall of their mother's anxiety. However, as with the parent sample, an examination of the beta weights indicated that the pattern of predictor variables was generally similar for White and Hispanic young adults. The number of Hispanic participants was much smaller than the number of White participants, and as a result, differences in statistically significant predictor variables across samples may be related to low statistical power in the Hispanic sample. This may have may have increased the likelihood of a type II error.

If the differences between samples based on statistical significance are taken at face value, the findings in the young adult sample indicate ethnic differences in the pattern of predictor variables of anxiety. Non-anxious parenting, one of the variables designed to measure recall

maternal behavior, was a significant predictor of anxiety in the White sample. However, variables measuring recall of maternal behaviors were not found to be significant predictors of anxiety in the Hispanic sample. The differences between the two ethnic groups appear to be similar to the findings in the mother sample, in which parenting behaviors did not predict anxiety in Hispanic children. Again, it is feasible that, for many Hispanic families, increased contact with other adults during childhood may minimize the impact of maternal behaviors in the development of anxiety.

Despite the potential ethnic differences the results should be interpreted with caution because, again, the Hispanic sample was much smaller than the White sample and may have lacked sufficient power to detect smaller effect sizes. It is also noteworthy that there were fewer significant predictors of anxiety in the young adult sample when compared to the maternal sample, for both ethnic groups, which may reflect methodological differences. For example, it is possible that retrospective recall of maternal behaviors may be less accurate than concurrent appraisals of behavior.

Summary and Clinical Implications

In summary, this study provides some insight into the mechanisms of learning associated with children learning anxiety from their parents, and includes the development of the first measure specifically focusing on the mechanisms of learning associated with anxiety. A second major contribution of this study to the literature on child anxiety is that these results identified the variables uniquely associated with the development of anxiety. It is hoped that the findings

yielded by this study advance the theoretical and methodological considerations in the area of childhood anxiety research and treatment.

This study has potential clinical implications relevant to prevention and treatment programs. In particular, the CLOAS potentially may be utilized as a clinical instrument measuring the degree to which parents engage in behaviors that may increase learning of anxiety in their children. Further, based on the learning-related constructs identified by the CLOAS (i.e., modeling, anxious-parenting, and non-anxious parenting), an effective intervention strategy may consist of working with parents to help them become aware of and to modify the degree to which they engage in these behaviors. Because modeling was identified as the most robust predictor of child anxiety, targeting and modifying maternal modeling may be a particularly important intervention strategy when treating child anxiety. In a related vein, families with a child who is at risk for developing an anxiety disorder (e.g., families with an anxious parent or a child with an inhibited temperament) may benefit from an anxiety prevention program that addresses the learning mechanisms addressed in this study.

The cross-cultural aspects of this study may also have relevant clinical applications. Specifically, although preliminary, this study suggests that risk factors potentially involved in the etiology of anxiety may vary as a function of ethnicity. Specifically, parenting variables appear to play a more significant role in the development of child anxiety in White families when compared to Hispanic families. Intervention and prevention programs may need to be clinically tailored to address different risk factors based on the ethnicity of the family. Further, because control was found to be a different construct for White mothers than for Hispanic mothers, clinicians and researchers should not assume that parental control is exerted in the same manner

across cultures or that control plays the same role in the development of psychopathology across cultures.

Recommendations for Future Research

Although the results of this study provide some understanding into the developmental risk and protective factors associated with the development of child anxiety, additional studies providing a comprehensive and simultaneous examination of the variables associated with the development of child anxiety are recommended. In particular, examination of the predictor variables of child anxiety utilizing other methodological strategies such as observational and longitudinal studies may provide greater understanding of the factors associated with the development of child anxiety.

Regarding ethnic comparisons between Whites and Hispanics, a limitation of the current analysis is that parental control could not be included in the regression equation in the mother sample because the measure of control utilized in this study, the PBI-Control subscale, was found to be unreliable. In response to this limitation, it is recommended that this study be replicated utilizing a measure of parental control that is structurally equivalent across ethnic groups. Continued research in this area may lead to the development and refinement of culture-specific prevention and intervention programs.

Despite the promising findings with the CLOAS, there are a number of recommended directions of research with this measure. Specifically, test-retest reliability has not yet been established for the CLOAS. Further, longitudinal studies should be conducted using the CLOAS to establish the predictive validity of this measure. It may also be beneficial to replicate the

current study in order to confirm the factor structure that was obtained with the current sample's data. Further, the current study only examined the CLOAS in the context of maternal behavior. It is recommended a sample of fathers complete the CLOAS to determine if paternal behaviors are similar to maternal behaviors in the prediction of child anxiety. Also, a child-report version of the CLOAS should be developed to determine if the factor structure is similar to the parent-report version of this measure. In addition, it is recommended that associations between the CLOAS and dimensions of anxiety other than general levels of anxiety, as measured by the RCMAS, are examined (e.g., worry, social anxiety, etc.). Finally, it is recommended that the CLOAS be administered to clinical samples to determine if the CLOAS discriminates between clinical and non-clinical children. All considered, the current study appears to have opened the door to myriad future studies measuring the developing of child anxiety.

APPENDIX A

SURVEY PACKET FOR PARENT SAMPLE

Informed Consent Form

Dear Parent/Guardian:

I am a graduate student at the University of Central Florida under the supervision of faculty member, Dr. Charles Negy, conducting research on the behavior of parents and their children. The purpose of this study is to examine the behavior and personality characteristics of mothers and their children, and to examine how mothers and their children interact with each other. The results of this study will help us better understand the behaviors and interactions of mothers and children.

Mothers who participate in this study will be asked to complete the questionnaires included in this packet. The identity participants and their children will be kept confidential, and the study results will only be reported in the form of group data.

Your participation in this project is voluntary. You do not have to answer any question(s) that you do not wish to answer. Please be advised that you may choose not to participate in this research, and you may withdraw from the experiment at any time without negative consequences. There are no known risks or immediate benefits to study participants. No compensation is offered to participants for their participation. Group results of this study will be available in August of 2005 upon request. If you have any questions about this research project, please contact me at (407) 823-4344 or my faculty supervisor, Dr. Charles Negy at (407) 823-5861. Questions or concerns about research participants' rights may be directed to the UCFIRB office, University of Central Florida Office of Research, Orlando Tech Center, 12443 Research Parkway, Suite 207, Orlando, FL 32826. The hours of operation are 8:00 am until 5:00 pm, Monday through Friday except on University of Central Florida official holidays. The phone number is (407) 823-2901.

Sincerely,
Brian Fisak

_____I have read the procedure described above.

_____I voluntarily give my consent for participation in Brian Fisak's study of the behaviors and personality characteristics of mothers and children.

_____/_____

Participant's Signature Date

_____/_____

Witness Signature Date

Directions

In the following questionnaires, you will be asked to answer questions about yourself and *your oldest child who lives with you and who is between ages of 6 and 12*. There are no right or wrong answers. Please complete all of the questionnaires.

Demographic Sheet
(Parent Version)

Your age ____

Gender: Male Female

Ethnicity
- Mexican American ____
- Cuban ____
- Puerto Rican ____
- Central American ____
  - If so please specify _____
- White ____
- African American ____
- Asian ____
- Other ____

Highest level of education:
- Elementary School ____
- Junior High School ____
- Vocational School/Community College ____
- College/University ____
- Graduate School/Professional School ____

Marital Status
- Married ____
- Single (never married) ____
- Separated from spouse ____
- Divorced ____
- Widowed ____

How many children are living currently at home? ____

Please list the age and gender of each of your children (please start with the oldest child):
- Child's age _____ Child's Gender: male and female
- Child's age _____ Child's Gender: male and female
- Child's age _____ Child's Gender: male and female
- Child's age _____ Child's Gender: male and female
- Child's age _____ Child's Gender: male and female

_____
_____

Do other relatives live in the house? Yes No
- If yes, please list their relation to you

_____

Demographic Sheet- Page 2
(Parent Version)

Directions: Please answer the following about your oldest child between the ages of 6 and 12:

What ethnicity is the father raising this child?

Mexican American ____
Cuban ____
Puerto Rican ____
Central American ____
If so please specify _____
White ____
African American ____
Asian ____
Other ____
Not applicable ____

To what extent do other people (besides the parents) assist in raising the this child?

Not at all	Somewhat	A fair amount	A lot
1	2	3	4

Depression Anxiety and Stress Scales (DASS)

Directions: Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to *you* over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me a considerable degree, or good part of the time
3 Applied to me very much or most of the time.

1.	I found it hard to wind down	0 1 2 3
2.	I was aware of dryness of my mouth	0 1 2 3
3.	I couldn't seem to experience any positive feeling at all	0 1 2 3
4.	I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	0 1 2 3
5.	I found it difficult to work up the initiative to do things	0 1 2 3
6.	I tended to over-react to situations	0 1 2 3
7.	I experienced trembling (e.g., in the hands)	0 1 2 3
8.	I felt that I was using a lot of nervous energy	0 1 2 3
9.	I was worried about situations in which I might panic and make a fool of myself	0 1 2 3
10.	I felt that I had nothing to look forward to	0 1 2 3
11.	I found myself getting agitated	0 1 2 3
12.	I found it difficult to relax	0 1 2 3
13.	I felt down-hearted and blue	0 1 2 3
14.	I was intolerant of anything that kept me from getting on with what I was doing	0 1 2 3
15.	I felt I was close to panic	0 1 2 3

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me a considerable degree, or good part of the time
3 Applied to me very much or most of the time.

16. I was unable to become enthusiastic about anything	0 1 2 3
17. I felt I wasn't worth much as a person	0 1 2 3
18. I felt that I was rather touchy	0 1 2 3
19. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0 1 2 3
20. I felt scared without any good reason	0 1 2 3
21. I felt that life was meaningless	0 1 2 3

State-Trait Anxiety Inventory- Parent Report (STAI-P)

Directions: A number of statements which people have used to describe themselves are given below. Read each statement below and then circle the response that indicates how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to best describe how you generally feel.

1. I feel pleasant.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
2. I feel nervous and restless.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
3. I feel satisfied with myself.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
4. I wish I could be as happy as others seem to be.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
5. I feel like a failure.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
6. I feel rested.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
7. I feel "calm, cool, and collected."	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
8. I feel that difficulties are piling up so that I cannot overcome them.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4
9. I worry too much over something that really doesn't matter.	Almost Never	Sometimes	Often	Almost Always
	1	2	3	4

10. I am happy.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
11. I have disturbing thoughts.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
12. I lack self-confidence.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
13. I feel secure.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
14. I make decisions easily.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
15. I feel inadequate.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
16. I am content.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
17. Some unimportant thought runs through my mind and bothers me.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
18. I take disappointments so keenly that I can't put them out of my mind.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
19. I am a steady person.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
20. I get in a state of tension or turmoil as I think over my recent recent concerns and interests.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4

Revised Children's Manifest Anxiety Scale (Parent-Report Version)

Directions: Please circle the one answer for each sentence that best describes your *oldest child who is between ages of 6 and 12*.

"Yes"- if the item is completely true
"Sort of"- if the item is partially true
"No"- if the item is not true at all

1. My child has trouble making up his/her mind.	Yes	Sort of	No
2. My child gets nervous when things do not go the right way for him/her.	Yes	Sort of	No
3. My child thinks that others do things easier than he/she can.	Yes	Sort of	No
4. Often my child has trouble getting his/her breath.	Yes	Sort of	No
5. My child worries a lot of the time.	Yes	Sort of	No
6. My child is afraid of a lot of things.	Yes	Sort of	No
7. My child gets mad easily.	Yes	Sort of	No
8. My child worry about what Mom or Dad will say to him/her.	Yes	Sort of	No
9. My child feels that others do not like the way he/she does things.	Yes	Sort of	No
10. It is hard for my child to get to sleep at night.	Yes	Sort of	No
11. My child worries about what people think about him/her.	Yes	Sort of	No
12. My child feels alone even when there are people with him/her.	Yes	Sort of	No
13. Often my child feels sick in the stomach.	Yes	Sort of	No
14. My child's feelings get hurt easily.	Yes	Sort of	No
15. My child's hands feel sweaty.	Yes	Sort of	No
16. My child is tired a lot.	Yes	Sort of	No
17. My child worries about what is going to happen.	Yes	Sort of	No

"Yes"- if the item is completely true
"Sort of"- if the item is partially true
"No"- if the item is not true at all

18. Other children are happier than my child.	Yes	Sort of	No
19. My child has bad dreams.	Yes	Sort of	No
20. My child's feelings get hurt easily when he/she is scolded.	Yes	Sort of	No
21. My child feels that someone will say he/she does things the wrong way.	Yes	Sort of	No
22. My child wakes up scared some of the time.	Yes	Sort of	No
23. My child worries when he/she goes to bed at night.	Yes	Sort of	No
24. It is hard for my child to keep his/her mind on schoolwork.	Yes	Sort of	No
25. My child wiggles in his/her seat a lot.	Yes	Sort of	No
26. My child is nervous.	Yes	Sort of	No
27. My child believes that a lot of people are against him/her.	Yes	Sort of	No
28. My child often worries about something bad happening to him/her.	Yes	Sort of	No

Child Temperament Questionnaire
(Sociability Scale)

Directions: For each statement, please circle the number from one to six that best describes *your oldest child who is between ages of 6 and 12* when he/she was between the ages of 3 and 6. Please try to answer the questions to the best of your ability, based on how you think your child compared to other children of about the same age. Please circle the choice that seems to fit best.

1 almost never	2 infrequently	3 usually does not	4 usually does	5 very often	6 almost always

1. My child is shy with adults.	almost never	1 2 3 4 5 6	almost always
2. My child is immediately friendly with and approaches unknown adults who visit our home.	almost never	1 2 3 4 5 6	almost always
3. When first meeting new children, my child is bashful.	almost never	1 2 3 4 5 6	almost always
4. When in the park, at a party or visiting, my child will go up to strange children and join their play.	almost never	1 2 3 4 5 6	almost always
5. If my child is shy with a strange adult he/she quickly (within a half hour or so) gets over this.	almost never	1 2 3 4 5 6	almost always
6. The first time my child is left in a new situation without mother (such as school, nursery, music lesson, camp), he/she gets upset.	almost never	1 2 3 4 5 6	almost always
7. When the family takes a trip, my child immediately makes self at home in the new surroundings.	almost never	1 2 3 4 5 6	almost always
8. In a new situation, such as a nursery, day care center, or school my child is still uncomfortable even after a few days.	almost never	1 2 3 4 5 6	almost always
9. My child is at ease within a few visits when visiting someone else's home.	almost never	1 2 3 4 5 6	almost always

Behavioral Inhibition Scale (BIS)

Directions: Please answer the following items. Choose the response that best describes *your oldest child who is between ages of 6 and 12.*

1. My child is shy when he/she has to talk to an unfamiliar person.

1	2	3	4
Never	Sometimes	Often	Always

2. My child talks easily to an unfamiliar person.

1	2	3	4
Never	Sometimes	Often	Always

3. My child feels nervous when he/she talks to an unfamiliar person.

1	2	3	4
Never	Sometimes	Often	Always

4. My child feels good and is able to laugh, when he/she talks to an unfamiliar person.

1	2	3	4
Never	Sometimes	Often	Always

Parent Bonding Instrument (Parent Version)

Directions: Please answer the following questions about you and *your oldest child who is between ages of 6 and 12.*

1. Speak to him/her with a warm and friendly voice. (C)
   Very like Moderately like Moderately unlike Very unlike

2. Do not help him/her as much as he/she needs. (C-r)
   Very like Moderately like Moderately unlike Very unlike

3. Let him/her do those things he/she likes doing. (BF)
   Very like Moderately like Moderately unlike Very unlike

4. Seem emotionally cold to him/her. (C-r)
   Very like Moderately like Moderately unlike Very unlike

5. Understand his/her problems and worries. (C)
   Very like Moderately like Moderately unlike Very unlike

6. Am affectionate to him/her. (C)
   Very like Moderately like Moderately unlike Very unlike

7. Like him/her to make his/her own decisions. (BF)
   Very like Moderately like Moderately unlike Very unlike

8. Do not want him/her to grow up. (PA)
   Very like Moderately like Moderately unlike Very unlike

9. Try to control everything he/she does. (PA)
   Very like Moderately like Moderately unlike Very unlike

10. Invade his/her privacy.
   Very like Moderately like Moderately unlike Very unlike

11. Enjoy talking thing things over with him/her. (C)
   Very like Moderately like Moderately unlike Very unlike

12. Frequently smile at him/her. (C)
   Very like Moderately like Moderately unlike Very unlike

13. Tend to baby him/her. (PA)
   Very like Moderately like Moderately unlike Very unlike

14. Do not seem to understand what he/she needs or wants. (C-r)
Very like Moderately like Moderately unlike Very unlike

15. Let him/her decide things for his/her self. (BF)
Very like Moderately like Moderately unlike Very unlike

16. Make him/her feel he/she isn't wanted. (C-r)
Very like Moderately like Moderately unlike Very unlike

17. Can make him/her feel better when he/she is upset. (C)
Very like Moderately like Moderately unlike Very unlike

18. Do not talk with him/her very much. (C-r)
Very like Moderately like Moderately unlike Very unlike

19. Try to make him/her dependent on me. (PA)
Very like Moderately like Moderately unlike Very unlike

20. Fell he/she can not look after his/her self unless I am around. (PA)
Very like Moderately like Moderately unlike Very unlike

21. Give him/her as much freedom as he/she wants. (BF)
Very like Moderately like Moderately unlike Very unlike

22. Let him/her go out as often as he/she wants. (BF)
Very like Moderately like Moderately unlike Very unlike

23. Am overprotective of him/her. (PA)
Very like Moderately like Moderately unlike Very unlike

24. Do not praise him/her. (C-r)
Very like Moderately like Moderately unlike Very unlike

25. Let him/her dress in any way he/she pleases. (BF)
Very like Moderately like Moderately unlike Very unlike

Child Learning of Anxiety Scale- Parent Version (CLOAS-P)

Directions: Please answer the following questions about you and your oldest child who is between ages of 6 and 12.

1. My child knows when I am nervous.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

2. My child knows about the things that I fear.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

3. When I become anxious or nervous, my child seems to react.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

4. I hide my fears from my child. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

5. I worry about my child, and my child knows it.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

6. When I worry about things in general my child knows it.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

7. My child rarely sees me in an anxious/nervous state. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

8. When I worry, my child seems to worry.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

9. I am rarely in an anxious/nervous state when around my child. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

10. I can hide my anxiety and worries from my child. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

11. My child sees me handling challenging situations with confidence. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

12. My child sees that I am confident in social situations. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

13. My child sees that I am uncomfortable when interacting with others.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

14. My child sees me become stressed.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

15. I frequently tell my child to be careful.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

16. I frequently tell my child about ways to avoid danger.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

17. I tell my child that the best way to handle somebody who bothers you is to confront them. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

18. I tell my child that if something makes them nervous, they should face the challenge. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

19. I tell my child that the best way to deal with their fears is to face them. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

20. Courage is a characteristic that I teach my child. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

21. My child and I frequently have discussions about the things that I think he/she should avoid.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

22. I rarely tell my child that new and unfamiliar situations can be dangerous. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

23. I tell my child he/she should avoid confrontation with others.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

24. I discuss with my child how to avoid situations that are scary for him/her.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

25. I tell my child about the things that may hurt him/her.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

26. If my child believes something is unfair, I tell him/her that speaking up is the thing to do. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

27. I tell my child that they should do what they can to get away from scary situations.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

28. I tell my child that if they are not feeling physically well, they should avoid anything challenging.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

29. I reward my child for brave/courageous behavior. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

30. If my child is nervous, I will do whatever I can to comfort him/her.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

31. If my child is afraid in a particular situation, I will encourage him/her to face the situation. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

32. If my child is afraid to go to a social gathering, it is not ok if he/she stays home. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

33. I help my child find ways to avoid scary situations.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

34. I encourage my child to face his/her fears. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

35. If my child finds something scary, I will let them put if off until later.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

36. I will let my child delay facing new challenges if he/she does not feel well.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

37. If I see my child starting to get nervous, I will give them a special reward to make him/her feel better.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

38. I reassure my child repeatedly if he or she is worried.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

39. I encourage my child to interact with others even if he or she is nervous. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

40. My child receives praise for facing his/her fears. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

Marlowe-Crowne Social Desirability Scale

Directions: Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide weather the item is true or false as it pertains to you personally. Please circle T or F for each item.

1. It is sometimes hard for me to go on with my work if I am not encouraged.	T	F
2. I sometimes feel resentful when I don't get my way.	T	F
3. On a few occasions, I have given up doing something because I thought too little of my ability.	T	F
4. There have been times when I felt like rebelling against people in authority even thought I knew they were right.	T	F
5. No matter who I'm talking to, I'm always a good listener.	T	F
6. There have been occasions when I took advantage of someone.	T	F
7. I'm always willing to admit it when I make a mistake.	T	F
8. I sometimes try to get even rather than forgive and forget.	T	F
9. I am always courteous, even to people who are disagreeable.	T	F
10. I have never been irked when people expressed ideas very different from my own.	T	F
11. There have been times when I was quite jealous of the good fortune of others.	T	F
12. I am sometimes irritated by people who ask favors of me.	T	F
13. I have never deliberately said something that hurt someone's feelings.	T	F

Readjustment Rating Scale

Directions: Please place a check the events below that have occurred over the past 12 months.

1. Death of a spouse ____
2. Divorce ____
3. Marital separation ____
4. Jail term ____
5. Death of a close family member ____
6. Personal injury or illness ____
7. Marriage ____
8. Fired at work ____
9. Marital reconciliation ____
10. Change in health of a family member ____
11. Sex difficulties ____
12. Change in financial state ____
13. Death of a close friend ____
14. Change to a different line of work ____
15. Foreclosure of mortgage or loan ____

Bidimensional Acculturation Scale

Directions: Please answer the following questions.

1. How often do you speak English?

Almost Always	Often	Sometimes	Never
4	3	2	1

2. How often do you speak English with your friends?

Almost Always	Often	Sometimes	Never
4	3	2	1

3. How often do you think in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

4. How often do you speak Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

5. How often do you speak Spanish with your friends?

Almost Always	Often	Sometimes	Never
4	3	2	1

6. How often do you think in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

7. How well do you Speak English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

8. How well do you read English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

9. How well do you understand television programs in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

10. How well do you understand radio programs in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

11. How well do you write in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

12. How well do you understand music in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

13. How well do you speak Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

14. How well do you read Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

15. How well do you understand television programs in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

16. How well do you understand radio programs in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

17. How well do you write in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

18. How well do you understand music in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

19. How often do you watch television programs in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

20. How often do you listen to radio programs in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

21. How often do you listen to music in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

22. How often do you watch television programs in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

23. How often do you listen to radio programs in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

24. How often do you listen to music in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

Participant Debriefing

If you are interested in obtaining a summary of the purpose of the study and the results of the study, please list your name and address below:

Name: _____
Address:_____
_____
_____

APPENDIX B

SURVEY PACKET FOR YOUNG ADULT SAMPLE

Informed Consent Form

Dear Student:

My name is Brian Fisak, and I am a graduate student working under the supervision of faculty member, Dr. Charles Negy. You are being asked to participate in a study designed to gather information on the behavior and personality characteristics of college students and their parents. This research project was designed solely for research purposes and no one except the research team will have access to any of your responses. All responses will be kept confidential. Your identity will be kept confidential using a numerical coding system.

Your participation in this project is voluntary. You do not have to answer any question(s) that you do not wish to answer. Please be advised that you may choose not to participate in this research, and you may withdraw from the study at any time without negative consequences. Non-participation will not affect your grade. You will receive 60 minutes worth of extra credit points for participating. There are no other direct benefits or compensation for participation. This study will take approximately 60 minutes outside of your regularly scheduled class time. There are no anticipated risks associated with participation.

If you have any questions or comments about this research, please contact Brian Fisak or his faculty supervisor, Dr. Charles Negy, in the Department of Psychology at (407) 823-4344. Questions or concerns about research participants' rights may be directed to the UCFIRB office, University of Central Florida Office of Research, Orlando Tech Center, 12443 Research Parkway, Suite 207, Orlando, FL 32826. The phone number is (407) 823-2901.

Sincerely,

Brian Fisak

_____I have read the procedure described above.

_____I voluntarily agree to participate in the procedure and I have received a copy of this description.

_____/_____

Participant Signature Date

Demographic Sheet
(Student Version)

Your age ____

Gender: Male Female

Ethnicity
- Mexican American ____
- Cuban ____
- Puerto Rican ____
- Central American ____
  - If so please specify _____
- White ____
- African American ____
- Asian ____
- Other ____

Class Standing
- Freshmen ____ Sophomore ____
- Junior ____ Senior ____
- Other _____

Marital Status
- Married ____ Single (never married) ____
- Separated from spouse ____ Divorced ____
- Widowed ____

Do you have any children? Yes No
- If yes, please list their ages _____
- If you have children, do they live with you? Yes No

Do you live with relatives live in the house? Yes No
- If yes, please list their relation to you _____

Do you work? Yes No
- If yes, how many hours a week? _____

Highest level of education obtained by your mother:
- Elementary School ____
- Junior High School ____
- Vocational School/Community College ____
- College/University ____
- Graduate School/Professional School ____

Demographic Sheet- Page 2
(Student Version)

Do you have any brothers or sisters? ____
If yes, how many brothers? ____
If yes, how many sisters? ____
If yes, what number in the birth order are you? (e.g., 1st, 2nd, 3rd, etc…) _____

What is the ethnicity of your father?
Mexican American ____
Cuban ____
Puerto Rican ____
Central American ____
If so please specify _____
White ____
African American ____
Asian ____
Other ____
Not applicable ____

What is the ethnicity of your mother?
Mexican American ____
Cuban ____
Puerto Rican ____
Central American ____
If so please specify _____
White ____
African American ____
Asian ____
Other ____
Not applicable ____

Depression Anxiety and Stress Scales (DASS)

Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me a considerable degree, or good part of the time
3 Applied to me very much or most of the time.

1. I found it hard to wind down	0 1 2 3
2. I was aware of dryness of my mouth	0 1 2 3
3. I couldn't seem to experience any positive feeling at all	0 1 2 3
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	0 1 2 3
5. I found it difficult to work up the initiative to do things	0 1 2 3
6. I tended to over-react to situations	0 1 2 3
7. I experienced trembling (e.g., in the hands)	0 1 2 3
8. I felt that I was using a lot of nervous energy	0 1 2 3
9. I was worried about situations in which I might panic and make a fool of myself	0 1 2 3
10. I felt that I had nothing to look forward to	0 1 2 3
11. I found myself getting agitated	0 1 2 3
12. I found it difficult to relax	0 1 2 3
13. I felt down-hearted and blue	0 1 2 3
14. I was intolerant of anything that kept me from getting on with what I was doing	0 1 2 3
15. I felt I was close to panic	0 1 2 3

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me a considerable degree, or good part of the time
3 Applied to me very much or most of the time.

16. I was unable to become enthusiastic about anything	0 1 2 3
17. I felt I wasn't worth much as a person	0 1 2 3
18. I felt that I was rather touchy	0 1 2 3
19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)	0 1 2 3
20. I felt scared without any good reason	0 1 2 3
21. I felt that life was meaningless	0 1 2 3

Retrospective Self-Report of Inhibition (RSRI)

The following questions are about things you may have done and feelings you may have had as a child. In answering these questions, please think of yourself as you were in elementary school (Grades 1-6). If you cannot remember or are not sure about an answer, please make your best guess.

1. On the average, how often per year were you absent from school due to illness?
   a. 0-4 days b. 5-9 days c. 10-14 days d. 15-19 days e. 20 or more days

2. On the average, how often per year were you sent to the nurse's office due to illness?
   a. 0-4 days b. 5-9 days c. 10-14 days d. 15-19 days e. 20 or more days

3. Did you have illnesses/symptoms such as headaches or stomach aches for which the doctors could not find a cause?
   a. never b. rarely c. sometimes d. often e. very often

4. How often did you have nightmares?
   a. never b. once a year c. once a month d. once a week e. every night

5. Were you scared of the dark?
   a. never b. once a year c. once a month d. once a week e. every night

6. Was it necessary for you or your parents to check under your bed or closet before you went asleep?
   a. never b. once a year c. once a month d. once a week e. every night

7. Did you need to have a special stuffed animal, blanket, or toy with you so that you could fall asleep?
   a. never b. once a year c. once a month d. once a week e. every night

8. Were you afraid of dogs, cats, or other domestic animals?
   a. never b. once a year c. once a month d. once a week e. every day

9. Were you afraid of unfamiliar animals, such as those you encountered on the street or at someone else's home?
   a. never b. once a year c. once a month d. once a week e. every day

10. Were you scared that you would be kidnapped or otherwise separated from your parents?
    a. never b. rarely c. sometimes d. often e. very often

11. Did it upset you when your parents left you with a new, unfamiliar baby-sitter?
    a. never b. once a year c. once a month d. once a week e. every night/day

12. When your parents went out without you, were you scared that they might not come back?
a. never b. once a year c. once a month d. once a week e. every night/day

13. Did you sleep over friend's houses?
a. very often b. often c. sometimes d. rarely e. never

14. Did you try new foods?
a. eagerly b. agreeably c. with coaxing d. only if pressured e. never

15. Were you usually scared on the first day of school of a new school year?
a. not at all b. slightly c. moderately d. very e. terrified

16. Did you ever pretend to be sick in order to avoid going to school or other social events?
a. never b. rarely c. sometimes d. often e. very often

17. Did it upset you to be called up to the backboard?
a. not at all b. slightly c. moderately d. very e. terrified

18. Did it upset you to be called on, even if you knew the answer?
a. not at all b. slightly c. moderately d. very e. terrified

19. Did your teachers have trouble hearing you when you spoke or answered a question in class?
a. never b. once a year c. once a month d. once a week e. every day

20. If there was something that you did not understand in class, did you ask the teacher for help?
a. always b. often c. sometimes d. rarely e. never

21. During recess, did you play with the main group of children?
a. always b. often c. sometimes d. rarely e. never

22. Did you enjoy participating in party games?
a. always b. often c. sometimes d. rarely e. never

23. Did you enjoy meeting new children your age?
a. always b. often c. sometimes d. rarely e. never

24. Did your voice squeak, crack, or sound shaky when you were talking in front of a group of people?
a. never b. once a year c. once a month d. once a week e. every day

25. How popular did you feel?
a. very b. moderately c. average d. below average e. not at all

26. Did you have any problems with, or have to see a doctor for allergies, sleeplessness, or constipation?
a. never b. rarely c. sometimes d. often e. very often

27. Did you need a night-light or hall light on in order to go to sleep?
a. never b. once a year c. once a month d. once a week e. every night

28. Did you willingly participate in group singing or plays?
a. always b. often c. sometimes d. rarely e. never

29. Were your feelings easily hurt?
a. never b. rarely c. sometimes d. often e. very often

30. Did you tell your friends or family members when you were angry with them?
a. always b. often c. sometimes d. rarely e. never

Parent Bonding Instrument (Student Version)

Directions: Please answer the following questions about your mother's behavior when you were a child.

1. Spoke to me with a warm and friendly voice. (C)
   Very like Moderately like Moderately unlike Very unlike

2. Did not help me as much as I needed. (C-r)
   Very like Moderately like Moderately unlike Very unlike

3. Let me do those things I liked doing. (BF)
   Very like Moderately like Moderately unlike Very unlike

4. Seemed emotionally cold to me. (C-r)
   Very like Moderately like Moderately unlike Very unlike

5. Appeared to understand my problems and worries. (C)
   Very like Moderately like Moderately unlike Very unlike

6. Was affectionate to me. (C)
   Very like Moderately like Moderately unlike Very unlike

7. Liked me to make my own decisions. (BF)
   Very like Moderately like Moderately unlike Very unlike

8. Did not want me to grow up. (PA)
   Very like Moderately like Moderately unlike Very unlike

9. Tried to control everything I did. (PA)
   Very like Moderately like Moderately unlike Very unlike

10. Invaded my privacy.
   Very like Moderately like Moderately unlike Very unlike

11. Enjoyed talking thing things over with me. (C)
   Very like Moderately like Moderately unlike Very unlike

12. Frequently smiled at me. (C)
   Very like Moderately like Moderately unlike Very unlike

13. Tended to baby me. (PA)
   Very like Moderately like Moderately unlike Very unlike

14. Did not seem to understand what I needed or wanted. (C-r)
Very like Moderately like Moderately unlike Very unlike

15. Let me decide things for myself. (BF)
Very like Moderately like Moderately unlike Very unlike

16. Made me feel I wasn't wanted. (C-r)
Very like Moderately like Moderately unlike Very unlike

17. Could make me feel better when I was upset. (C)
Very like Moderately like Moderately unlike Very unlike

18. Did not talk with me very much. (C-r)
Very like Moderately like Moderately unlike Very unlike

19. Tried to make me dependent on him/her. (PA)
Very like Moderately like Moderately unlike Very unlike

20. Felt could not look after myself unless she/he was around. (PA)
Very like Moderately like Moderately unlike Very unlike

21. Gave me as much freedom as I wanted. (BF)
Very like Moderately like Moderately unlike Very unlike

22. Let me go out as often as I wanted. (BF)
Very like Moderately like Moderately unlike Very unlike

23. Was overprotective of me. (PA)
Very like Moderately like Moderately unlike Very unlike

24. Did not praise me. (C-r)
Very like Moderately like Moderately unlike Very unlike

25. Let me dress in any way I pleased. (BF)
Very like Moderately like Moderately unlike Very unlike

Child Learning of Anxiety Scales-Student Version (CLOAS-C)

Directions: Please answer the following questions about your mother's behavior when you were a child.

1. I knew when my mother was nervous.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

2. I knew about the things that my mother feared.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

3. When my mother became anxious or nervous, I seemed to react.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

4. My mother hid her fears from me. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

5. My mother worried about me, and I knew it.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

6. When my mother worried about things in general, I knew it.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

7. I rarely saw my mother in an anxious state. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

8. When my mother worried, I seemed to worry.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

9. My mother was rarely in an anxious/nervous state when around me. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

10. My mother hid her anxiety and worries from me. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

11. I saw my mother handle challenging situations with confidence. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

12. I saw my mother was confident in social situations. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

13. I saw that my mother was uncomfortable when interacting with others.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

14. I saw when my mother became stressed.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

15. My mother frequently told me to be careful.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

16. My mother told me about ways to avoid danger.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

17. My mother told me that the best way to handle somebody who bothers me is to confront them. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

18. My mother told me that if something makes me nervous, I should face the challenge. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

19. My mother told me that the best way to deal with my fears is to face them. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

20. Courage is a characteristic that my mother taught me. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

21. My mother and I frequently had discussions about the things that she thinks I should avoid.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

22. My mother rarely told me that new and unfamiliar situations could be dangerous. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

23. My mother told me that I should avoid confrontation with others.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

24. My mother discussed with me how to avoid situations that were scary for me.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

25. My mother told me about the things that may hurt me.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

26. If I believed that something was unfair, my mother told me that speaking up was the thing to do. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

27. My mother told me that I should do what they I can get away from scary situations.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

28. My mother told me that if I was not feeling physically well, I should avoid anything challenging.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

29. My mother rewarded me for brave/courageous behavior. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

30. If I child was nervous, my mother did whatever she could to comfort me.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

31. If I was afraid in a particular situation, my mother encouraged me to face the situation. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

32. If I was afraid to go to a social gathering, it was not ok if I stayed home. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

33. My mother helped me find ways to avoid scary situations.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

34. My mother encouraged me to face my fears. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

35. If I found something to be scary, my mother would let me put it off until later.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

36. My mother would let me delay facing new challenges if I was not feeling well.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

37. If my mother saw me starting to get nervous, she gave me a special treat to make me feel better.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

38. My mother reassured me repeatedly if I was worried.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

39. My mother encouraged me to interact with others even if I was nervous. (r)

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

40. I received praise from my mother for facing my fears. (r).

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1	2	3	4	5

State-Trait Anxiety Inventory- Report of Parents (STAI-P)

Directions: Think back to your childhood. Read each statement below and then circle the response that indicates how you believe your mother *generally* felt when you were a child. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to best describe how your mother generally feet.

1. My mother felt pleasant.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
2. My mother felt nervous and restless.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
3. My mother felt satisfied with herself.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
4. My mother wished she could be as happy as others seemed to be.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
5. My mother felt like a failure.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
6. My mother felt rested.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
7. My mother was "calm, cool, and collected."	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
8. My mother felt that difficulties were piling up so that she could not overcome them.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
9. My mother worried too much over something that really didn't matter.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4

10. My mother was happy.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
11. My mother had disturbing thoughts.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
12. My mother lacked self confidence.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
13. My mother felt secure.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
14. My mother made decisions easily.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
15. My mother felt inadequate.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
16. My mother was content.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
17. Some unimportant thought ran through my mother's mind and bothered her.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
18. My mother took disappointments so keenly that she couldn't put them out of her mind.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
19. My mother was a steady person.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4
20. My mother got in a state of tension or turmoil as she thought over her recent concerns and interests.	Almost Never 1	Sometimes 2	Often 3	Almost Always 4

Marlowe-Crowne Social Desirability Scale

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide weather the item is true or false as it pertains to you personally. Please circle T or F for each item.

1. It is sometimes hard for me to go on with my work if I am not encouraged.	T	F
2. I sometimes feel resentful when I don't get my way.	T	F
3. On a few occasions, I have given up doing something because I thought too little of my ability.	T	F
4. There have been times when I felt like rebelling against people in authority even thought I knew they were right.	T	F
5. No matter who I'm talking to, I'm always a good listener.	T	F
6. There have been occasions when I took advantage of someone.	T	F
7. I'm always willing to admit it when I make a mistake.	T	F
8. I sometimes try to get even rather than forgive and forget.	T	F
9. I am always courteous, even to people who are disagreeable.	T	F
10. I have never been irked when people expressed ideas very different from my own.	T	F
11. There have been times when I was quite jealous of the good fortune of others.	T	F
12. I am sometimes irritated by people who ask favors of me.	T	F
13. I have never deliberately said something that hurt someone's feelings.	T	F

Readjustment Rating Scale

Directions: Please place a check the events below that have occurred over the past 12 months.

1. Death of a spouse ____
2. Divorce ____
3. Marital separation ____
4. Jail term ____
5. Death of a close family member ____
6. Personal injury or illness ____
7. Marriage ____
8. Fired at work ____
9. Marital reconciliation ____
10. Change in health of a family member ____
11. Sex difficulties ____
12. Change in financial state ____
13. Death of a close friend ____
14. Change to a different line of work ____
15. Foreclosure of mortgage or loan ____

Bidimensional Acculturation Scale

1. How often do you speak English?

Almost Always	Often	Sometimes	Never
4	3	2	1

2. How often do you speak English with your friends?

Almost Always	Often	Sometimes	Never
4	3	2	1

3. How often do you think in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

4. How often do you speak Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

5. How often do you speak Spanish with your friends?

Almost Always	Often	Sometimes	Never
4	3	2	1

6. How often do you think in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

7. How well do you Speak English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

8. How well do you read English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

9. How well do you understand television programs in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

10. How well do you understand radio programs in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

11. How well do you write in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

12. How well do you understand music in English?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

13. How well do you speak Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

14. How well do you read Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

15. How well do you understand television programs in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

16. How well do you understand radio programs in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

17. How well do you write in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

18. How well do you understand music in Spanish?

Very Well	Well	Poorly	Very Poorly
4	3	2	1

19. How often do you watch television programs in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

20. How often do you listen to radio programs in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

21. How often do you listen to music in English?

Almost Always	Often	Sometimes	Never
4	3	2	1

22. How often do you watch television programs in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

23. How often do you listen to radio programs in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

24. How often do you listen to music in Spanish?

Almost Always	Often	Sometimes	Never
4	3	2	1

Participant Debriefing

If you are interested in obtaining a summary of the purpose of the study and the results of the study, please list your name and address below:

Name: _____
Address:_____
_____
_____

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL FORM

University of Central Florida

Office of Research & Commercialization

March 26, 2004

Brian Fisak
Department of Psychology
P.O. Box 161390
Orlando, FL 32816-1390

Dear Mr. Fisak:

With reference to your protocol entitled, "Predicting Anxiety from Parent and Childhood Variables," I am enclosing for your records the approved, executed document of the UCFIRB Form you had submitted to our office.

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur. Further, should there be a need to extend this protocol, a renewal form must be submitted for approval at least one month prior to the anniversary date of the most recent approval and is the responsibility of the investigator (UCF).

Should you have any questions, please do not hesitate to call me at 823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

Chris Grayson

Chris Grayson
Institutional Review Board (IRB)

Copies: Dr. Charles Negy
IRB File

12201 Research Parkway • Suite 501 • Orlando, FL 32826-3246 • 407-823-3778 • Fax 407-823-3299

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